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First Biennial Report

OF THE

State Board of Education

State of California

1913-14



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STATE PRINTING OFFICE
1915

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CALIFORNIA STATE BOARD OF EDUCATION.

WILLIAM H. LANGDON, San Francisco.....Term expires 1917
MRS. O. SHEPARD BARNUM, Alhambra.....Term expires 1917
GEORGE W. STONE, Santa Cruz.....Term expires 1916
CHARLES F. STERN,* Eureka.....Term expires 1916
LAWRENCE E. CHENOWETH, Bakersfield.....Term expires 1915
MRS. AGNES RAY, Oakland.....Term expires 1915
ERNEST P. CLARKE, Riverside.....Term expires 1914
MARSHALL DEMOTTE,† Corning.....Term expires 1916
CHARLES A. WHITMORE, Visalia.....Term expires 1915

*Resigned March, 1914.
†Appointed May, 1914, *vice* C. F. Stern, resigned.

NOTE.—Mr. Whitmore was appointed in January, 1915, to succeed Mr. Chenoweth, resigned.

OFFICERS OF THE BOARD.

W. H. LANGDON.....*President*
MRS. O. SHEPARD BARNUM.....*Vice President*
EDWARD HYATT.....*Ex officio Secretary*

COMMISSIONERS.

MARGARET E. SCHALLENBERGER.....*Commissioner of Elementary Schools*
WILL C. WOOD.....*Commissioner of Secondary Schools*
EDWIN R. SNYDER.....*Commissioner of Industrial and Vocational Education*

COMMITTEES.

September, 1913, to May, 1914.

Textbooks.
MR. STERN, MRS. BARNUM, MR. STONE.

Life Diplomas and High School Credentials.
MR. CHENOWETH, MR. CLARKE, MRS. BARNUM.

Retirement Salaries.
MR. STONE, MRS. RAY, MR. STERN.

Accrediting.
MRS. BARNUM, MR. CHENOWETH, MR. CLARKE.

Legislation.
MRS. RAY, MR. CLARKE, MR. STERN.

Auditing.
MR. HYATT.

Normal Schools.
MR. LANGDON, MR. CHENOWETH, MRS. BARNUM.

Health and Development Certificate.
MR. CHENOWETH, MR. CLARKE, MRS. BARNUM.

Examinations.
MR. CLARKE, MR. CHENOWETH, MRS. BARNUM.

Since May, 1914.

Textbooks.
MR. DEMOTTE, MRS. BARNUM, MR. STONE.

Life Diplomas and High School Credentials.
MR. CHENOWETH, MR. CLARKE, MRS. BARNUM.

Retirement Salaries.
MR. STONE, MRS. RAY, MR. DEMOTTE.

Accrediting.
MRS. BARNUM, MR. CHENOWETH, MR. CLARKE.

Legislation.
MRS. RAY, MR. CLARKE, MR. DEMOTTE.

Auditing.
MR. HYATT.

Normal Schools.
MR. LANGDON, MR. CHENOWETH, MRS. BARNUM.

Health and Development Certificate.
MR. CHENOWETH, MR. CLARKE, MRS. BARNUM.

Examinations.
MR. CLARKE, MR. CHENOWETH, MRS. BARNUM.

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PART I.

LETTER OF TRANSMITTAL AND REPORT OF PRESIDENT.

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LETTER OF TRANSMITTAL.

The State Board of Education has the honor to submit to his Excellency, Hiram W. Johnson, Governor of California, in accordance with section 1519 of the Political Code, its first biennial report.

The report contains, in addition to a résumé of the activities of the Board, the reports of the various committees of the Board, the reports of the Commissioners and the Superintendent of Public Instruction, and the report of the Public School Teachers' Retirement Salary Fund Board.

Respectfully submitted.

STATE BOARD OF EDUCATION.

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REPORT OF THE PRESIDENT.

In accordance with the provisions of section 1517 of the Political Code of California, approved June 6, 1913, the members of the State Board of Education were appointed by your Excellency, August 29, 1913. The Board held its first meeting in Sacramento, September 10, 1913, and organized as provided by law.

A State Board of Education consisting of seven members appointed by the Governor, is a new departure in the administration of the California school system. Another new feature embodied in the statute creating the Board is that none of its members may be actively engaged in school work during their respective terms of office.

THE COMMISSIONERS.

In pursuance of the expressed intent of the legislature, the Board took steps immediately to select a Commissioner of Elementary Schools, a Commissioner of Secondary Schools, and a Commissioner of Industrial and Vocational Education. This was one of the most important of the duties with which this Board was charged. These Commissioners were to constitute an entirely new force in the educational work of the state, supplying adequate specialized supervision for the schools. Recognizing the responsibilities to be placed upon the Commissioners, and the expectations that had been aroused among the school people of the state regarding their usefulness, time was taken for a very thorough investigation of the men and women available; and the counsel of some of the best educational authorities in California and the East was secured.

As a result of this investigation, the Board at its meeting in December, 1913, appointed Margaret E. Schallenberger Commissioner of Elementary Schools, Will C. Wood Commissioner of Secondary Schools, and E. R. Snyder Commissioner of Industrial and Vocational Education. These Commissioners assumed the duties of their respective offices January 1, 1914.

In organizing their work, the Commissioners have gathered, systematized and made available much information and data of great value in shaping educational policies. In their visitation and observation of schools, they are becoming thoroughly conversant with the educational needs and conditions of the entire state. By lecturing at teachers' institutes, addressing various public gatherings, attending teachers' conferences and advising school trustees, superintendents and principals, the Commissioners are disseminating the highest educational ideals and are rendering a real and practical educational service which is already appreciated by the people of this state.

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THE RURAL SCHOOL.

I cannot refrain from directing your attention to a few of the suggestions which appear in the reports of the Commissioners. In the matter of supervision, city school systems in California are well provided for. The supervision of our rural schools, however, is clearly inadequate. This condition may be remedied by the employment of additional supervisors, by urging communities to take advantage of existing laws permitting the consolidation of school districts, and by discouraging the creation of new districts through division of old ones, which will increase the efficiency of the schools with no increase of cost. We must endeavor not only to maintain rural schools of a standard equal to that of the urban schools, but we must aim to give the rural schools some of those cultural agencies which have proved so beneficial in the city. Of these, the moving picture and the phonograph are no longer experiments. With the rural school as a neighborhood center, the parents as well as the children of the community may derive profit and enjoyment from these educational features. By requiring standardization of equipment it will be practicable for the state to lend films or reels and phonograph records to the various counties or school districts in the same manner perhaps as books are now distributed from the state library. A moderate appropriation would enable a start to be made along this line.

It is the desire of the Board to be of real practical service to the schools of this state. In view of the unsatisfactory types of rural school architecture and poor conditions of lighting, heating and ventilating in rural school buildings, we believe that the state, through the proper department, should prepare and keep on hand plans and specifications of various types of school buildings, to be lent to any school district in the state. In doing this, the state would be rendering an inexpensive and valuable service to the rural communities.

IMPROVEMENTS IN STANDARDS OF CERTIFICATION.

Some professional educators of the state undoubtedly feared that a lay Board of Education would propose iconoclastic changes in the educational affairs of the state, and lower standards that had come to be recognized as essential to the successful administration of the schools.

On the contrary, the Board has been specially careful to maintain and safeguard in every way California's recognized high standards for the certification of teachers and for the accreditation of educational institutions.

A revision of the rules governing high school certification has been made in the interest of clearness, and to bring the California requirements into harmony with the best practice of other states, and with recent legislation.

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The Board heartily endorses the recent establishment of a training school in Oakland for prospective teachers in high schools. This meets a long felt need, and augurs well for the increased efficiency of high school teachers.

The standard for the accreditation of normal schools has been raised, so that now only those normal schools are eligible which meet the highest standard of California normal schools, namely, those which require for admission graduation from a four-year high school course, and give at least a two-year course of professional training of attested merit.

In the matter of kindergartens (as in that of vocational education) the lay Board has shown itself at once sensitive to the needs and wishes of the people of the state, and scrupulous in providing sound and stable ways of meeting these needs. Recent legislation has opened the way for an increase in the number of kindergartens and a projection of kindergarten ideals. Consequently, the board has conducted—through its experts—an exhaustive investigation of the kindergarten training schools of the country, in order to determine standards and revise its accredited list so that an adequate number of well trained kindergarten teachers may be secured to meet the needs of this growing and popular feature of the school system of the state.

PROPOSED SCHOOL LEGISLATION.

The Board has been cautious in recommending new legislation because it believes that a new constitution is necessary before any real progress can be made in educational legislation. However, the Board is carefully studying the larger educational problems of the state, and as it sees a solution of these problems, it will recommend such legislation as may be necessary. For the recommendations of this Board on school legislation, your attention is directed to the report of the Committee on Legislation, submitted herewith.

FREE TEXTBOOKS.

The plan of furnishing free textbooks to the pupils of the elementary schools, which went into effect in November, 1912, has been successfully carried out. It is a matter for congratulation that common school education is now entirely free to the children of California. Through the economical and efficient methods of the State Printing Office, the appropriation of $500,000 made by the legislature for this purpose has been sufficient to provide all textbooks required and will show a balance of $129,906.56 at the end of the present fiscal year. The amount expended to date for free textbooks is $379,727.19. The Commissioner and textbook expert are now reviewing various textbooks and unpublished manuscripts. In adopting textbooks the Board will aim to obtain the best textbooks known to educational experts. In

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making any changes, however, the Board will endeavor to make a financial saving to the state by obtaining the most favorable prices.

SECONDARY EDUCATION.

The Board believes that the high schools of the state should attract and hold a larger number of pupils than they do at present. In the last two years of the elementary school and the first two years of the high school, large numbers of pupils drop out. For the purpose of holding pupils in school longer, two plans have been suggested—one is designed to effect a reorganization of the work of these four years through the intermediate school; the other is designed to assist small rural high schools in making their work more attractive and broader in its scope.

These plans are more fully discussed in the report of the Committee on Legislation, submitted herewith.

VOCATIONAL EDUCATION.

In the creation of the department of industrial and vocational education our state has committed itself to a policy that will place it in line with the leading states in educational matters. While vocational education includes training in agricultural branches, it is in the city that greatest advancement has been made in vocational training. This work deserves to be fostered and developed, for through it, we believe, many of the social and ethical problems of our country may be solved, by holding pupils in school for a longer time, and training them to earn a livelihood. In establishing this important educational work on a firm basis, state, county and district should coöperate.

TEACHERS' RETIREMENT SALARY FUND.

In obedience to the law of the state the Board has met quarterly since its organization, namely, in September, December, March and June. Because of the great amount of work entailed in organization, it has been necessary to hold special meetings on the following dates:

September 22, 1913; November 11, 1913; January 12, 1914; April 8, 1914.

It will be remembered that the powers and duties of the Public School Teachers' Retirement Salary Fund Board are lodged in the State Board of Education, thus giving the Board a dual function. The Public School Teachers' Retirement Salary Fund Board is a distinct organization under the law. Since, however, its officers and members are also officers and members of the State Board of Education, it has been deemed advisable to hold the meetings of this Board while the members are assembled for the sessions of the State Board of Education, thereby saving traveling expenses of members. Since the state pays a retirement salary of $500 per annum to each annuitant under

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this law, a sum equivalent to 5 per cent interest on an investment of $10,000, the members of the Retirement Salary Fund Board deem it incumbent upon them to scrutinize and thoroughly investigate the qualifications of each applicant for the retirement salary, and feel that in the disbursement of this fund they should show the same care, prudence and fidelity as is shown by other trustees or by bank directors. Since the retirement salary law went into effect, 169 applications for retirement have been filed, and 130 have been granted. As each applicant is obliged under the rules to furnish evidence of his qualification for retirement by filing certificates and affidavits showing when and where his teaching service was rendered, and, as each applicant's history extending over a period of at least thirty years must be investigated, the Retirement Salary Fund Board has been obliged to devote much time to its work.

In closing, permit me to say that my colleagues of the State Board of Education are fully mindful of the responsibilities resting upon them in the shaping of the educational policies of California. They have brought to their work high ideals, sound judgment and a true devotion to the welfare of the public school system. The work of the Board is accomplished very largely through committees, the members of which are deserving of the highest commendation for their diligence and fidelity in the discharge of their duties. The reports of the committees are incorporated in this report.

Respectfully submitted.

W. H. LANGDON, President.

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PART II.

REPORTS OF THE COMMITTEES.

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REPORT OF THE TEXTBOOK COMMITTEE.

The publication of textbooks by the State of California can be divided into three distinct periods. The first period dates from 1884 with the adoption of the Perry amendment to section 7 of the state constitution to 1903 which followed the adoption of the Perry amendment in section 7 of the state constitution of 1879. In accordance with the laws existing during this period, the books were written by teachers of the state employed by the State Board of Education and printed at the State Printing Office. This method proved very unsatisfactory, and was abandoned in 1903, when, under a ruling of the Attorney General, it was held that although state textbooks must be printed and manufactured in the State Printing Office, the subject matter of the books might be leased or purchased outside of the state. With this ruling began the second period, and the State Board of Education opened negotiations with various publishing houses for the lease of plates on a royalty basis, intending thus to secure satisfactory textbooks by choosing from the best in the market. The result of this plan has been much more satisfactory, and there has been a steady reduction in the cost of our textbooks due in part to competition among the publishing houses, which has tended to reduce the royalty, but principally, under the present management of the State Printing Office, to the efficiency of that department, which has, within two years, cut the cost to nearly one half what the parents of the state paid for their children's books four years ago.

The selection of textbooks has usually been made upon the recommendation of expert readers employed by the State Board of Education with the final approval by that Board, and the contracts with the publishing companies have usually required duplicate sets of plates, together with such changes in the text as were at the time recommended. The statute provided that the textbook committee of the former Board should be composed of the Governor, Superintendent of Public Instruction and one member of the Board, and as the work was at times arduous, it necessarily drifted into the hands of those willing to do it. We find no uniform form of contract in existence and are somewhat embarrassed by that fact.

Before the state adopted a system of free textbooks in 1912, the books printed by the State Printer were, according to law, sold by the Superintendent of Public Instruction to dealers or to the officers of the schools at a cost based on the royalty paid and the cost of their manufacture. It is to be regretted that the excessive cost in manufacturing during many years, due to the inefficiency of the State Printing Office, placed

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the people of the state under a direct burden which was lifted in part when the management of the State Printing Office was changed, and completely, when the free textbooks began to be issued.

At the November election of 1912 the people of the state amended the constitution so as to provide for a reorganization of the State Board of Education, and for free textbooks. On the passage of this amendment the former Board ceased to act, consequently the state was without a State Board of Education until a new law providing for a new Board had been passed, and this new Board had been appointed and finally qualified. The new Board met for the first time in September, 1913.

The third textbook period dates from January 15, 1913, when the constitutional amendment authorizing the free distribution of state textbooks became operative. It had been thought that this work would not begin until the end of that school year, then half over, but the interpretation put upon the constitutional amendment by the Attorney General necessitated the immediate distribution of free textbooks.

From the carefully compiled tables to be found in the report of the Superintendent of Public Instruction, it will be seen that there were on hand January 15, 1913, when the law became unexpectedly operative, 229,862 bound books, and 224,477 writing (copy) books. Against this assortment, which should have been ample for the ordinary mid-winter demands, was launched an unprecedented requisition causing a shortage of books which was annoying, but wholly unpreventable. That time has passed, and with steadier demands and growing precedents upon which to base estimates, we trust there may never again occur serious interruptions in the distribution of free textbooks. By June 30, 1913, or during the first five and a half months, there were distributed 359,634 bound books, and 118,299 copy books, the latter at a cost, for distribution, of $2,787.24, or practically 5.8 mills, a trifle over a half cent per copy. This date brings us to the beginning of the fiscal year, but the work of this Board did not begin until September 10, 1913, when its members qualified.

When the present State Board of Education came into being, September 10, 1913, it found that the system of printing and distributing free textbooks in accordance with the amendment to section 7 of article 9 of the constitution of the state, had been begun, as stated above, January 15, 1913, under an interpretation of the law by the Attorney General that the free textbook act became operative upon the passage of the amendment authorizing it. Under this ruling a state series of textbooks, of which this Board had no official knowledge, and for which it had no responsibility, had already been established and a system of distribution begun. It was under such conditions that this textbook committee took up the work where others had left off.

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The state series thus established prior to the creation of this Board, and inherited by it, consists of textbooks adopted at various times by the former State Board of Education. These books are all being manufactured by the state under existing or expired contracts upon a royalty basis, the royalty being payable to the owners of the copyrights. As yet we have made no new contracts, but are now preparing a speller bulletin compiled in our office and have experts investigating all the book series used in the elementary schools.

PRESENT CONTRACTS WITH PUBLISHERS.

	Royalty (per copy)	Date of exp'n of contract
AMERICAN BOOK COMPANY:		
McMaster's Brief History of the United States	.15	Jan. 1, 1918
McClymonds and Jones Essentials in Arithmetic	.09	July 1, 1918
McClymonds and Jones Elementary Arithmetic	.0525	July 1, 1918
Brooks Second Reader	.0525	July 1, 1914
Brooks Third Reader	.06	July 1, 1914
Spencer Sons Writing (five books)	.01	Jan. 1, 1912
THE MACMILLAN COMPANY:		
Chancellor's Speller—two books	.025	July 1, 1911
Tarr & McMurry Introductory Geography	.09	July 1, 1916
Tarr & McMurry Advanced Geography	.15	July 1, 1916
D. C. HEATH AND COMPANY:		
Thomas Introductory History	.15	July 1, 1910
Dunn's Community and the Citizen (Civics)	.125	Jan. 1, 1918
SILVER-BURDETT AND COMPANY:		
A First Reader (Progressive Road to Reading)	.048	July 1, 1914
A Fourth Reader (Stepping Stones to Literature)	.09	July 1, 1914
A Fifth Reader (Stepping Stones to Literature	.09	July 1, 1914
Guide Books to English (Book 1)	.0675	July 1, 1916
Guide Books to English (Book 2)	.09	July 1, 1916
NEWSON AND COMPANY:		
A Primer (Aldine Primer)	.048	July 1, 1914
WORLD BOOK COMPANY:		
Primer of Hygiene	.06	July 1, 1916

On January 15, 1913, when the free textbook distribution began, there were on hand in the state warehouse 503,599 books of all kinds. Between then and June 30th of that year there were manufactured 449,098, a total of 952,697 books. During this period there were distributed 477,933 books, leaving on hand June 30, 1913, the end of the fiscal year, a balance of 474,764 books. During the fiscal year 1913-14, there were manufactured 1,351,715 books, which, together with the number on hand July 1, 1913, as above, give us a total on June 30, 1914, of 1,826,479. There were distributed in this fiscal year 1,379,154 books and there were sold to dealers, private schools and others in the state, 13,516, leaving us a balance on hand, July 1, 1914, of 433,809 books.

Among the interesting results found in our experience thus far, we note first, that the cost of distribution has been reduced to a trifle less

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than 5.5 mills per book, a material reduction in expense; that the cost of manufacture has been lessened; and that the first estimate of our needs made in 1912 of 1,611,000 volumes, based on attendance in all grades, was not justified by nearly a quarter of a million books, and this, in spite of the fact that the increase of enrollment during the past year had been greater than ever before in our school history. These figures effectually dispose of the objections sometimes made that free textbooks are incompatible with public economy, and sustain for us the contention that the citizens of California are willing to care for the property of the state as for their own. They also offer the best evidence in answer to the question as to the ability of the State of California to minister directly to the needs of her citizens in this popular manner.

The distribution of the textbooks for the elementary schools has been carried out according to rules covering requisitions, specifications and necessary statistics, to be furnished by the county and city superintendents' offices. As yet no steps have been taken to enforce care and preservation of the books, so issued, after they have passed into the hands of the districts, and thus beyond the jurisdiction of this Board, as there has been no evidence of either waste or injury. A careful study of the requisitions made by school districts shows no disposition to order beyond apparent needs. All these matters are under careful supervision in the office of the Superintendent of Public Instruction.

Very interesting has been the question of costs of textbooks. In spite of the decided advance in the market price of paper and other supplies needed in their manufacture, our textbooks have cost less with each edition. An exceedingly clever scheme of cost finding maintained by the Superintendent of Printing keeps us posted on the exact cost of each book. Some unfair statements have been made concerning our textbook costs, but so accurately is the record kept that our cost figures cannot be questioned.

Last year the State of Georgia had a committee investigating cost of school books, and in their report they have listed a number of states of the union, with the cost in each, of a single series of elementary school textbooks. From that report we learn that in Georgia, a single series of textbooks costs $7.90; Idaho, $10.09; Indiana, $5.85; Kansas, $5.57; Oregon, $9.52; Utah, $17.41; Virginia, $9.79. This same report gives California as $5.95. The whole report seems to be naturally antagonistic to state publication of textbooks. We have no way of verifying the figures from other states as given above, which are of about half the number of states quoted, and representative of all, but it is interesting to note that $5.95, which they give for California, was not the cost but a former dealer's retail selling price for a series of our textbooks. As a matter of fact on July 1, 1914, our cost of the same

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series was $4.60, much lower than any other state given. This report goes on to make a general charge that the State of California has a million dollars invested in a rapidly depreciating printing plant for the sole purpose of printing textbooks, while, as every citizen knows, the plant is equipped and maintained for the purpose of state and legislative printing, as well as for the printing of texts. The plant is thoroughly up-to-date, though very poorly housed. Their criticism that our books are not up to the grade of similar works turned out by regular publishing houses is trivial and manifestly unfair.

AN EIGHTH GRADE PUPIL'S OUTFIT OF BOOKS.

Take a concrete case, that of the books for a pupil in the eighth grade of the grammar school, the grade using the most expensive free textbooks.

Books	Former state selling prices				Publisher's list price	Cost to state, 1914
	1902	1906	1910	1912		
Reader	$.60	$.60	$.60	$.38	$.60	$.24
Speller	.31	.25	.24	.22	.25	.14
Advanced Arithmetic	.50	.60	.50	.37	.60	.23
Brief History	.82	.95	.80	.71	.80	.41
Advanced Geography	1.20	1.20	.95	.87	1.00	.54
English Lessons	.55	.55	.59	.55	.60	.26
Hygiene	.58	.44	.49	.28	.40	.18
Civics	.54	-------	.60	.48	.75	.31
Copy books	.08	.08	.08	.06	.08	.04
	$5.18	$4.72	$4.81	$3.92	$5.08	$2.35

This case is simply that of the ordinary eighth grade outfit, and reference to it will disclose that books which formerly cost approximately $5, all of which the parents paid, are now being furnished free and that the cost to the state is only $2.35. Since there are over 35,000 eighth grade children in the schools of the state, we are effecting in this item alone a saving of over $90,000. There is a corresponding economy in equipping the children of the other grades. There has been a saving to the parents in another direction, not available in figures.

HIGH SCHOOL TEXTBOOKS.

Section 1750 of the Political Code, governing the selection of high school textbooks, was found by the Commissioner of Secondary Schools to be widely disregarded. On his recommendation, an administrative plan for enforcing the regulations of this law was adopted by the Board and its measures immediately became operative. The lists of high school texts as published by the former Board, with the exception of vocational and commercial studies, which are still under consideration, was brought down to date by eliminations and additions and the list of expert readers

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reviewed and changed to meet present requirements. Details of the administrative plan may be found in the report of the Commissioner of Secondary Education.

In accordance with section 1527 of the Political Code, the Board adopted resolutions stating that preference will be given to texts "entirely written, compiled, printed and published in the State of California," providing that merit be the sole criterion in judging all texts from whatsoever source. In deciding upon the comparative merits of textbooks, this Board purposes giving due consideration to the judgment of the teachers of the state.

We append herewith the financial statement of the textbook fund June 30, 1914. It will be noticed that the balance on hand from the former revolving fund July 1, 1913, was $77,365.32. To this fund $300,000 of the $500,000 made available for free textbooks by the legislature of 1913, has been added. The statement shows a credit balance of $129,906.56 and to this should be added $200,000 remaining of our original half million appropriation, leaving available for the publication of free textbooks July 1, 1914, to June 30, 1915, $329,906.56.

Based on present cost of books, and taking into consideration the needs for the years 1914–15 and 1915–16, and the rapid growth of our school system, and bearing in mind the fact that we are just beginning an extensive and possibly rather expensive study of all our textbook needs, we deem it best to ask that the next legislature place at the disposal of this Board $500,000 for textbook publication during the next two years.

Respectfully submitted.

MARSHALL DEMOTTE,
GEORGE W. STONE,
MARY G. BARNUM,
Textbook Committee

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Statement of the School Book Fund Account.

RECEIPTS.

Date		Amount received
July 1, 1913	On hand	$77,356 32
Oct. 8, 1913	Transferred appropriation	100,000 00
Oct. 16, 1913	Refund from redemption of all textbooks (Alderman)	7 59
Dec. 1, 1913	Book sales	882 45
Jan. 2, 1914	Book sales	66 73
Feb. 2, 1914	From superintendent, San Francisco, collections from lost books	84 95
Feb. 5, 1914	Transferred from appropriation	200,000 00
Feb. 3, 1914	Book sales	73 32
Mar. 1, 1914	Book sales	323 12
April 1, 1914	Book sales	421 87
June 3, 1914	Book sales	180 22
June 6, 1914	From superintendent, San Francisco, lost and damaged texts	321 62
		$379,727 19

EXPENDITURES.

	Amount expended
State Printer, cost of manufacturing	$156,871 81
Royalties	80,970 22
Redemptions to dealers	7,684 38
Clerk hire	799 98
Freight, express, postage	3,484 24
Balance	129,906 56
	$379,727 19

REPORT OF THE COMMITTEE ON ACCREDITATION.

To the Honorable State Board of Education:

Your Committee on Accreditation submits the following annual report:

The particular work of the Accreditation Committee has been to investigate the fitness of certain schools outside of the state to receive the recommendation of the State Board of Education as required by law and by the rules of the Board.

These are of three classes: *First,* graduate schools, the credits of which may be accepted for the graduate work required for regular high school certificates; *second,* normal schools, the diplomas of which may be accepted in granting elementary certificates; *third,* kindergarten training schools, the graduates of which may receive kindergarten-primary certificates.

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This work obviously requires expert professional skill. Therefore, all investigations have been placed in the hands of the Commissioners of the Board—the Commissioner of Secondary Schools taking charge of those pertaining to graduate schools, the Commissioner of Elementary Schools taking charge of those pertaining to normal schools and kindergarten training schools.

APPROVED GRADUATE SCHOOLS.

Approved graduate schools include the University of California, Leland Stanford Junior University, the University of Southern California (for graduate work done after 1911–12), and such other universities or colleges belonging to the Association of American Universities, or Association of State Universities, approved by the State Board of Education as offering graduate academic and professional preparation equivalent in quality to that offered by the University of California. The institutions so approved are as follows:

Indiana University, Bloomington, Ind.
University of Michigan, Ann Arbor, Mich.
University of Pennsylvania, Philadelphia, Pa.
University of Wisconsin, Madison, Wis.
Princeton University, Princeton, N. J.
University of Virginia, Charlottesville, Va.
Yale University, New Haven, Conn.
University of Illinois, Urbana, Ill.
University of Missouri, Columbia, Mo.
University of Minnesota, Minneapolis, Minn.
Iowa State University, Iowa City, Ia.
University of Kansas, Lawrence, Kan.
Catholic University of America, Washington, D. C.
University of Chicago, Chicago, Ill.
Clark University, Worcester, Mass.
Columbia University, New York City.
Cornell University, Ithaca, N. Y.
Harvard University, Cambridge, Mass.
Johns Hopkins University, Baltimore, Md.
University of Nebraska, Lincoln, Neb.

The following institutions are accredited with the proviso that this accreditation shall not extend to post-graduate work done prior to the academic year 1911–1912:

Ohio State University, Columbus, Ohio.
University of Washington, Seattle, Wash.
University of Colorado, Boulder, Colo.
University of Texas, Austin, Tex.

NORMAL SCHOOLS.

Article XVI, section 1775, of the Political Code, states that county boards of education may, without examination, grant certificates to holders of California state normal school diplomas, San Francisco city normal school diplomas heretofore granted, and other normal school diplomas; *provided,* that the State Board of Education of this state

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shall have recommended the normal school issuing said diploma as being of equal rank with the state normal schools of California. This provision necessitated knowledge of the efficiency of normal schools desiring to be accredited in California. The State Board of Education immediately preceding the one now serving recognized one hundred and thirty-seven normal schools as issuing diplomas equal to those of California, designating them the list of accredited normal schools. Such a list was necessarily unstable. Institutions not accredited were continually applying to be recommended, and their requests were either granted or refused; while those accredited were, from time to time, investigated in order that there should be no doubt concerning their claims to be considered of equal rank with the California state normal schools.

The Committee on Accreditation, on assuming the duties of office, found an accumulation of applications waiting to be acted upon. It found also that some years had elapsed since the last investigation of accredited normal schools had been made. The committee, therefore, recommended a revision of the list of accredited normal schools, based upon an investigation. No institution was to be accredited which did not reach the highest standard of California normal schools. The Board authorized this investigation and revision to be conducted, as stated above, by the Commissioner of Elementary Schools.

Essential requirements for the accreditation of an institution claiming equal rank with the normal schools of California were considered to be the following:

For entrance into the normal school a four years' course in a good high school—minimum requirement; for graduation, two years of professional training, with practice teaching of at least one period a day for a year. Not always were the conditions quite so clear-cut and simple, but nothing less than the equivalent of such requirements was deemed equal to those of the California normal schools.

An application form was sent to each normal school on the accredited list, the entrance requirements and professional training of which were not known to be entirely satisfactory, and to normal schools applying to be accredited. A circular letter was sent to the state superintendents of public instruction in the states from which normal schools were being considered for accreditation. Where possible, additional information of certain normal schools was obtained through personal interviews with men who were well acquainted with their standing and history. Catalogues of the schools and other of their printed documents outlining the courses of study, stating the size of the faculties and their training, and touching upon many other significant facts were carefully examined.

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The following list, selected upon the principles and employing the methods above stated, was submitted for accreditation, as being equal in rank to the California state normal schools:

LIST OF ACCREDITED NORMAL SCHOOLS.

Arizona:
- Flagstaff (1902).
- Tempe (1900).

Canada:
- Fredericton, N. B. (1902 to 1907).
- London, Ont. (1901 to 1907).
- Ontario Normal College, Hamilton (1903 to 1907).
- Ottawa, Ont. (1901 to 1907).
- School for Teachers, Macdonald College, formerly McGill Normal, Quebec (1904 to 1907).
- Toronto, Ont. (1901 to 1907).
- Truro, Nova Scotia (1903 to 1907).
- Winnipeg, Manitoba (1907 only).

Colorado:
- State Teachers College, formerly State Normal School, Greeley (1898).

Connecticut:
- Danbury (1909).
- New Britain (1902).
- New Haven (1903).
- Willimantic (1902).

District of Columbia:
- The James Ormond Wilson Normal School, formerly Washington City Normal No. 1 (1903).

England:
- Normal Dept., Edge Hill Training College, Liverpool (1904).

Idaho:
- Albion (1911).
- Lewiston (1911).

Illinois:
- Chicago Normal (1901).
- Eastern State Normal, Charleston (1900).
- Northern State Normal, De Kalb (1900).
- Southern State Normal, Carbondale (1901).
- State Normal University, Normal (1900).
- University of Chicago, Normal Dept. (1906).
- Western State Normal, Macomb (1905).

Indiana:
- Normal Training School, Indianapolis (1913).
- Terre Haute (1900).

Iowa:
- College of Education, Drake University, Des Moines (1905).
- State Teachers College, formerly State Normal, Cedar Falls (1900).

Kansas:
- Emporia (1904).
- Fort Hays Normal, Fort Hays (1911).

Kentucky:
- Western State Normal, Bowling Green (1914).

Louisiana:
- Natchitoches (1901).

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Maine:
Aroostook State Normal, Presque Isle (1905).
Castine (1901).
Farmington (1901).
Gorham (1901).

Maryland:
Baltimore (1904).
Baltimore Training School for Teachers (1907).
Normal Dept., Washington College, Chestertown (1909 to 1912).

Massachusetts:
Boston (1903).
Bridgewater (1899).
Framingham (1900).
Fitchburg (1900).
Hyannis (1901).
Lowell (1900).
North Adams (1901).
Salem (1904).
Westfield (1900).
Worcester (1900).

Michigan:
Central State Normal, Mt. Pleasant (1900).
Northern State Normal, Marquette (1900).
Wales C. Martindale Normal Training School for Teachers, formerly Washington Normal, Detroit (1910).
Western State Normal, Kalamazoo (1906).
Ypsilanti (1900).

Minnesota:
Duluth (1903).
Mankato (1900).
Moorhead (1900).
St. Cloud (1900).
St. Paul Normal, St. Paul (1908).
Winona (1900).

Missouri:
Cape Girardeau (1902).
Kirksville (1900).
Maryville (1907).
Springfield (1907).
School of Education, University of Missouri, formerly Teachers College (1908).
Warrensburg (1900).

Montana:
Dillon (1906).

Nebraska:
Dept. of Education, University of Nebraska (1909).
Kearney (1906).
Peru (1902).
Teachers College, Nebraska Wesleyan University, University Place (1909).
Wayne (1911).

New Hampshire:
Keene (1913).
Plymouth (1902).

Nevada:
Normal Dept., State University, Reno (1900).

New Jersey:
Montclair (1909).
Trenton (1900).

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New Mexico:
Normal Dept., University of New Mexico, Albuquerque (1908).
Normal University, Las Vegas (1905).
Silver City (1908).

New York:
Albany (1900).
Brockport (1900).
Buffalo (1900).
Cortland (1900).
Fredonia (1900).
Geneseo (1900).
New Platz (1900).
New York City Normal (1902).
Oneonta (1900).
Oswego (1899).
Plattsburg (1901).
Potsdam (1900).
Teachers College, Syracuse University (1909).
Teachers College, Columbia University (1898).

North Carolina:
State Normal and Industrial College, Greensboro (1905).

North Dakota:
Teachers College, University of North Dakota, University (1909).

Ohio:
Baldwin-Wallace University Normal Dept., Berea (1907).
City Normal, Columbus (1909).
City Normal, Cleveland (1909).
City Normal, Dayton (1907).
City Normal, Toledo (1909).
State Normal College of Ohio University, Athens (1902).

Oklahoma:
Central, Edmond (1905).
East Central, Ada (1909).
Northeastern, Tahlequah (1909).
Northwestern, Alva (1908).
Southeastern, Durant (1909).
Southwestern, Weatherford (1909).

Oregon:
Monmouth (1912).

Pennsylvania:
Bloomsburg (1904).
California (1905).
Clarion (1905).
East Stroudsburg (1905).
Edinboro (1905).
Indiana (1905).
Kutztown (1905).
Lock Haven (1905).
Mansfield (1905).
Millersville (1905).
Philadelphia Normal for Girls (1905).
Shippensburg (1905).
Slippery Rock (1905).
West Chester (1905).

Rhode Island:
Providence (1900).

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South Carolina:
Winthrop Normal and Industrial College, Rock Hill (1906).

South Dakota:
Northern Normal and Industrial School, Aberdeen (1912).
Spearfish (1914).

Tennessee:
Peabody College for Teachers, Nashville (1901).

Utah:
School of Education, University of Utah, Salt Lake City (1903).

Washington:
Bellingham (Whatcom), (1902).
Cheney (1904).
Ellensburg (1904).

Wisconsin:
LaCrosse (1909).
Milwaukee (1896).
Oshkosh (1900).
Platteville (1901).
River Falls (1903).
Stevens Point (1903).
Superior (1900).
Whitewater (1901).

Wyoming:
Normal Dept., University of Wyoming, Laramie (1909).

KINDERGARTEN TRAINING SCHOOLS.

Article VII, section 1617*c* of the Political Code, reads as follows:

"The board of education of every city, city and county, or the board of school trustees of every school district in this state, shall upon petition of the parents or guardians of twenty-five or more children between the ages of four and one half and six years, residing within a mile of any elementary school building situate in such city, city and county or school district, establish and maintain a kindergarten, or kindergartens; *provided,* that such kindergarten, or kindergartens, shall be established only between the first day of June and the first day of August in any year. The board of education of every city, city and county, or board of school trustees of every school district, in which a kindergarten is established under the provisions of this act, shall, at least fifteen days before the month in which the board of supervisors is required by law to levy the taxes required for county purposes, submit to the county superintendent of schools, an estimate of the amount of money which will be required for the maintenance of any kindergarten, or kindergartens, in their several school districts for the ensuing school year. The county superintendent of schools shall thereupon examine said estimates and submit copies of the same, with his approval or disapproval endorsed thereon, to the board of supervisors and to the county auditor at the time he submits to them his estimate for the county school tax for the ensuing year. If the county superintendent of schools approve such estimate, the board of supervisors shall, at the time and in the manner of levying other taxes, levy and cause to be collected in the several school districts for which estimates have been submitted and approved as herein provided, the amount so estimated

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and approved. The fund so levied shall be known as the kindergarten fund of ———— school district (as the case may be), and shall be available for the maintenance of the kindergarten, or kindergartens, established under the provisions of this section, and the moneys drawn from such fund shall be paid out in the same manner as money from the state and county school funds for the maintenance of the elementary schools are drawn and paid out. If the average daily attendance in any kindergarten in any city, city and county, or school district, shall be ten or less for the school year, the governing body for such city, city and county, or school district, shall, at the close of such school year discontinue such kindergarten. In case a kindergarten shall be discontinued, as provided by this section, the property and funds of such kindergarten shall immediately revert to the elementary schools of the city, city and county, or school district, in which said kindergarten has been located."

Article X, section 1663, states that the holder of any valid special certificate for kindergarten work, or of any kindergarten primary certificate, who has had at least one year of training in a state normal school of California or other normal school accredited by the state board of education, or one year's teaching in an elementary school, shall be entitled to teach in the first grade of the elementary schools.

These two laws, the one providing for the establishment of kindergartens, the other extending certain opportunities of the primary school to kindergartens, emphasize the importance of care in the accreditation of kindergarten training schools. Therefore, your Committee on Accreditation instructed the Commissioner of Elementary Schools, January 14, 1914, to undertake the investigation of kindergarten training schools with a view to their standardization.

It has been found that standardization is extremely difficult owing to the fact that there are both public and private kindergarten training schools, that some are connected with normal schools, some with colleges, some with universities, some are independent and some are called associations. They vary greatly in the length and strength of their curricula, in the size and personnel of their faculties, and in the character of their "practice teaching."

In order to obtain as accurate information as possible, the following methods were used:

(1) Letters were written to some of the best known kindergartners in the country, and personal interviews were held with a number of them at the convention of the National Educational Association, held in St. Paul July 4–11, 1914. From these sources much valuable concrete, detailed information was obtained.

(2) Application forms to be filled out were sent to all institutions applying to be accredited.

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(3) Catalogues of kindergarten training schools, and other of their printed publications were carefully studied.

It seems to be generally conceded that the minimum requirements for the granting of a kindergarten diploma should be two years of professional training with practice in a good kindergarten, and that no student should be admitted into a kindergarten training school who has not completed a four-year course of study in a high school, or who has not received the equivalent of this education. These requirements, your Committee on Accreditation has made compulsory for all kindergarten training schools applying to be listed.

The list of accredited kindergarten training schools in force at the time of the organization of the present Board included sixty-five institutions. Information concerning each of these schools has been obtained. Some of them have been discontinued but remain listed in order that the diplomas of their graduates may be honored.

The following kindergarten training schools are recommended as worthy of accreditation:

LIST OF ACCREDITED KINDERGARTEN TRAINING SCHOOLS.

California:

Berkeley Kindergarten Training School, Berkeley (1909).
Broadoaks Kindergarten Training School, Pasadena.
California Kindergarten Free Normal Training School, San Francisco (1889).
Golden Gate Kindergarten Association, San Francisco (1903).
Miss Barnard's Kindergarten Training School, Berkeley (formerly Oakland) (1903).

Canada:

Toronto Normal Kindergarten Training School, Toronto (1906).

Colorado:

State Teachers College, formerly State Normal, Kindergarten Training Department, Greeley (1904).

Connecticut:

New Britain State Normal, Kindergarten Training Department (1908).

England:

Blackheath Froebelian School and Training College for Teachers, London (1906).
Edge Hill Training College, Kindergarten Department, Liverpool (1905).

Illinois:

Kindergarten Collegiate Institute, formerly Free Kindergarten Association, Chicago.
Chicago Froebel Association (1904).
National Kindergarten College, formerly Chicago Kindergarten College) (1903).
Chicago Kindergarten Institute (1902).
Froebelian School, Longwood, Chicago (1905).
University of Chicago, Kindergarten Training Department, College of Education.
Pestalozzi-Froebel Kindergarten Training School, Chicago (1907).

Indiana:

South Bend Training School, South Bend.
Teachers' College for Training Kindergartners and Primary Teachers, Indianapolis, formerly Indiana Kindergarten and Primary Normal Training School.

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Iowa:

Drake University Kindergarten Training School, Des Moines (1904).
State Teachers College, Kindergarten Training Department, Cedar Falls (1909).

Kansas:

State Normal, Kindergarten Department, Emporia.

Kentucky:

Free Kindergarten Association's Training School, Louisville.

Massachusetts:

Boston Normal School, Kindergarten Department.
Bridgewater State Normal, Kindergarten Department.
Garland Kindergarten Training School, Boston (1907).
Kindergarten Training School, 82 St. Stephen St., Boston (1908).
Miss Harriet Niel's (formerly Miss Fisher's) Training School for Kindergartners, Boston (1909).
Miss Page's Normal Kindergarten School, Danvers (1907).
Miss Wheelock's Kindergarten Training School, Boston.
Perry Kindergarten Normal School, Boston (1907).
Westfield State Normal, Kindergarten Department (1908).

Michigan:

Alma College, Kindergarten Department, Alma.
Central State Normal, Kindergarten Department, Mt. Pleasant (1909).
Grand Rapids Kindergarten Association Training School (1905).
Kalamazoo State Normal, Kindergarten Department.
Ypsilanti State Normal College, Kindergarten Training Department.

Minnesota:

Duluth Normal, Kindergarten Training Department (1910).
Mankato Normal, Kindergarten Department (1906).
Minneapolis Kindergarten Association Normal School (1904).
St. Paul Teachers' Training School, Kindergarten Department (1906).
Winona State Normal School, Kindergarten Training Department (1907).

Missouri:

Froebel Kindergarten Training School, Kansas City (1909).
St. Louis Public School System, Kindergarten Training Department (1909).
Warrensburg State Normal, Kindergarten Training Department (1909).

Nebraska:

Omaha Public Schools, Kindergarten Training Department (1906).
Peru Public Schools, Kindergarten Training Department (1903).

New York:

Adelphi College, Kindergarten Department, Brooklyn.
Buffalo State Normal, Kindergarten Training Department (1909).
Buffalo Kindergarten Association, Training Department.
Cortland State Normal, Kindergarten Department.
Ethical Culture School, Kindergarten Normal Department, New York City.
Fredonia State Normal, Kindergarten Training Department (1904).
Geneseo State Normal, Kindergarten Department.
New York Froebel Normal, New York City (1910).
Oswego State Normal, Kindergarten Department (1905).
Pratt Institute, Kindergarten Training Department, Brooklyn.
Teachers College, Columbia University, Kindergarten Department, New York City.
Utica Kindergarten Training School (1904).

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Ohio:
Cincinnati Kindergarten Association (1906).
Cleveland Kindergarten Training School.
Columbus Kindergarten Training School (1906).
Dayton Normal School, Kindergarten Department (1907).
Law-Froebel Kindergarten Training School, Toledo (1908).
Oberlin Kindergarten Training Association.

Oregon:
St. Helen's Hall, Portland (1907).

Pennsylvania:
Miss Hart's Training School for Kindergartners, Philadelphia (1909).
Philadelphia Training School for Kindergartners, Senior Course (1906).
Pittsburg Training School for Teachers, Kindergarten Training Department (1904), formerly Pittsburg and Allegheny Free Kindergarten Association (1904).
Temple University, Kindergarten Department, Philadelphia.

Rhode Island:
Providence State Normal, Kindergarten Training Department (1909).
The Froebel School, Providence (1904).

Texas:
Ft. Worth Kindergarten Training School.

Utah:
University of Utah, Kindergarten Training Department, Salt Lake City (1909).

Washington:
Seattle Training School for Kindergartners (1908).

Wisconsin:
Milwaukee State Normal, Kindergarten Department.
Superior State Normal, Kindergarten Department (1910).
Stout Training School for Kindergarten Teachers, Menominee (1905).
Wylie Training School, Madison (1901).

In the interest of thoroughness and for the convenience of county boards of education, the committee decided that changes in the accredited lists should only be made annually, the present list to stand until the meeting in March, 1915.

The chairman and members of the committee have worked throughout the year in close coöperation with the commissioners.

The Board has unanimously adopted the revised list, as recommended by the committee.

(Signed) MARY G. BARNUM, *Chairman.*
E. P. CLARKE.
LAWRENCE E. CHENOWETH.

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REPORT OF THE STATE BOARD HIGH SCHOOL CREDENTIAL COMMITTEE.

The work of the State Board High School Credential Committee has been very exacting, made so not only by the number of individual cases considered, but also by a desire upon the part of the committee to maintain the high standard which has been maintained in the past, or, where it seemed necessary, to raise that standard.

A résumé of the work done by this committee during the period ending June 30, 1914, shows unmistakably that the standard has been raised uniformly in high school certification requirements. The doubts of educators, and there were doubts, as to the advisability of a purely lay Board passing upon the certification of high school instructors, and the fear that the prideful standard in California might be lowered by the new State Board of Education, have been dissipated entirely, and this committee believes that its work has met with the commendation and approval of those most closely identified with, and interested in the educational advancement of California.

The law provides that the State Board of Education shall prescribe certain rules under which county boards, and city and county boards of education may grant regular certificates of the high school grade.

These requirements have been revised by the committee in the interest of clearness and to bring the requirements into harmony with the best practice in other states. The standard for regular certification has been advanced in the following particulars:

(*a*) The number of hours of pedagogy required has been increased from twelve to fifteen.

(*b*) Four pedagogical courses that bear directly on teaching problems in the high school have been prescribed. It was possible formerly for the candidate to elect courses in pedagogy regardless of their application in high school work.

(*c*) The candidate is required to take one graduate course in at least one of the subjects which he expects to teach.

(*d*) The new regulations clearly set forth exemptions from the prescribed pedagogical work which may be made where candidates are normal school graduates or teachers of experience.

(*e*) A form for recommending candidates for the high school certificate has been prescribed.

The last provision is for the purpose of aiding the work of county boards of education. County boards of education will no longer be confused by a variety of forms of recommendation, each setting forth different facts concerning the candidate's preparation, and the committee

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believes that experience will show more uniform action of county boards of education and a more rigid adherence to the standard of requirements.

These revised rules governing high school certification were prepared by the committee in conjunction with the Commissioner of Secondary Education, and issued in June, 1914, as California State Board of Education Bulletin No. 5.

The great bulk of work performed by the committee has been in passing upon the issuance of state board high school credentials. The law provides that the State Board of Education may consider the cases of individual candidates who have not the exact credentials required for regular high school certification.

The State Board of Education, in considering such cases through this committee, has hewn to the line by requiring that the standard shall be the same as for regular certification, accepting only after the closest investigation, satisfactory permitted equivalents. Candidates who in the judgment of the Board fully meet the academic and professional standards of regular certification have been granted the state board high school credential upon which county and city and county boards of education may grant high school certificates.

The strictest investigation is made by the committee before recommendation for action is made to the State Board of Education, and each application is weighed carefully and conscientiously. About two hundred and forty applications have been passed upon by the committee during the past year, and in many cases applicants were accorded the privilege of reconsideration to permit the introduction of further or more complete evidence of fitness for the credential.

The committee has endeavored earnestly to be of aid to those who are seeking the credential, and in many instances has recommended an additional educational course to be pursued, and when the required work has been accomplished satisfactorily, the credential has been issued.

The spirit of the committee has been not to sit in cold and unresponsive judgment upon the applications, but to aid in securing for California high schools the highest trained and best equipped teachers who, though barred by the regular requirements, were highly desirable and were admissible to certification through the granting of the state board high school credential.

The amount received under the law from applicants for the state board high school credential during the fiscal year ending June 30, 1914, was $559.80, and the cost of conducting the department, including the issuance of the documents to successful applicants, was $480.59.

It will be seen by this financial report that this department of the work of the State Board of Education is more than self-sustaining, and the expense of conducting it does not fall upon the state but upon the applicants for credentials.

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Upon the recommendation of this committee resolutions were adopted by the State Board of Education requesting the three accredited universities in California to organize teachers' training schools for the purpose of offering prospective high school teachers adequate opportunity for practice teaching.

The Commissioner of Secondary Education was directed to confer with the university authorities, and the committee has pleasure in reporting that the University of California, coöperating with the board of education of Oakland, has organized a training school of intermediate and secondary grade in which its students may take the courses in practice teaching under the supervision of competent heads of departments.

A preparatory department in which prospective high school teachers may do practice work is maintained by the University of Southern California. Leland Stanford Junior University is disposed to coöperate with the State Board, but so far has been unable to undertake the organization of a training school.

The work of this committee has been directed toward the consideration of problems and necessities arising out of certification of high school teachers, and its activities and work accomplished as set forth in this brief résumé, are respectfully submitted for approval.

LAWRENCE E. CHENOWETH, *Chairman.*
MARY G. BARNUM.
E. P. CLARKE.

REPORT OF THE COMMITTEE ON HEALTH AND DEVELOPMENT CERTIFICATION.

Under a law enacted in 1909, boards of school trustees and city boards of education are authorized to establish health and development supervision in the public schools of California, for the purpose of securing the correction of developmental and acquired defects of both pupils and teachers which interfere with health, growth and efficiency; to adjust school activities to health and growth needs and to development processes and to attend to all matters pertaining to school hygiene, and to bring about a special study of mental retardation and deviation of pupils.

The law specifically sets forth the requirements for certification of those who shall have charge of health and development supervision, and provides that a recommendation from the State Board of Education certifying special fitness for the work shall be granted.

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During the period ending June 30, 1914, this committee has passed upon and recommended granting seventeen health and development certificates. The form of the recommendation issued was changed by the committee whose recommendations were adopted by the State Board of Education.

LAWRENCE E. CHENOWETH, *Chairman.*
MARY G. BARNUM.
E. P. CLARKE.

REPORT OF COMMITTEE ON EXAMINATIONS.

To the State Board of Education:

Your Committee on Examinations presents the following annual report:

Two examinations for state high school credentials have been held during the past year; the first was conducted in December, that being the earliest date possible after the present State Board of Education went into office, and at that time twelve applicants were examined. The examinations were conducted at Los Angeles, San Jose and Chico, and nine of the twelve applicants were successful. The total cost of this examination was approximately $500; this, however, is a much larger sum than it will be necessary to expend on such examinations in the future, as the work is now being largely handled by the Commissioner of Secondary Education. For this December examination it was necessary to secure expert assistants for the preparation of the papers, the conduct of the examination and the grading of papers. The second examination was conducted in June, applicants being examined at Los Angeles and Sacramento; nine applicants appeared and seven of these made a passing grade. This examination was conducted under the direction of the Commissioner of Secondary Education and the total cost was approximately $90. This will fairly represent the cost of such examinations in the future, and our estimate is that as a maximum amount, not over $300 will be required to meet the expense of these examinations for the next biennial period.

While a large number of letters of inquiry are received regarding these examinations, it will be noted from the statistics given above that only a small number of applicants actually appear at the time the examinations are held. It is the opinion of the committee, therefore, that hereafter only one examination annually should be held instead of two as has been the rule in the past. We do not, however, ask definite action on that point at this time, deeming it wise to wait until some estimate can be made from the letters of inquiry as to the number who

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would be accommodated by the holding of such examination. These examinations undoubtedly have served a useful purpose in meeting the needs of exceptional cases and some strong teachers for high school work have secured their credentials in this manner. In view, however, of the large number of high school credentials that are being issued on credentials, the possibility of entirely discontinuing these examinations may well be considered. Specific recommendation on this point is reserved until the situation has been more fully canvassed, in the light of the experience of the coming year. If an examination is held the coming year, the date will probably be some time during the month of May.

Respectfully submitted.

E. P. CLARKE, *Chairman.*
LAWRENCE E. CHENOWETH.
MARY G. BARNUM.
Committee on Examinations.

REPORT OF THE LEGISLATIVE COMMITTEE.

September 17, 1914.

To the Honorable State Board of Education:

The Committee on Legislation desires to present the following report regarding the more important phases of educational legislation which will naturally be considered by the legislature at its coming session:

1. Repeated amendments and additions to the California school law have resulted in repetition and confusion, causing a demand for a recodification of the same to effect: (1) rearrangement of sections for ease of reference; (2) a clear statement with regard to the intent of the law; (3) to correct certain clerical errors and discrepancies.

In view, however, of the possibility of a constitutional convention being called, we recommend that all suggestions for changes or corrections in the present school laws, or for desired legislation along that line, be received and filed by this Board for future use unless emphatically requiring immediate action; but in the event that no constitutional convention is called, it will be the policy of this committee to recommend recodification and revision to perfect school administration.

2. We endorse the following recommendation made in the report of the Secondary Commissioner, regarding the recognition of the intermediate schools: "The law should definitely recognize the intermediate school, should provide for the granting of intermediate school certificates, legalize the introduction of certain school studies in the seventh and eighth years, and authorize the grouping of the seventh

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and eighth years with the ninth, or the ninth and tenth years in the intermediate school—the organization of intermediate schools to be left optional with the various school districts."

While, however, recognizing the value in practical efficiency of grouping the seventh, eighth, ninth and tenth years together in many communities, we should regret to see any legislation that would multiply distinct schools with graduation from one to the other. Wherever a break of this sort occurs, there is danger that the children will feel that they are through school and will be anxious to drop out. Whatever changes are made in the grouping of grades, the unity of the public schools from the first to the twelfth grade should be maintained.

3. We believe provision should be made for state aid for vocational schools, but in view of the fact that a feasible plan for such aid is now under consideration by several educational authorities in the state, who are interested in the movement for vocational education, we are not prepared at this time to endorse any specific plan. The Commissioner of Industrial and Vocational Education has gathered and embodied in his annual report quite specific suggestions for the organization of vocational schools, which report we trust will result in general consideration of this matter throughout the state, in order that before the next legislature meets sufficient data will be at hand to form the basis of desired legislation along this line.

4. The present law regarding the attendance in the organized high schools of the state, of pupils from districts having no high schools, is unsatisfactory and inequitable. This Board is now conducting an investigation regarding the feasibility of providing by law for a general county high school fund. That plan would result in free high school privileges for all pupils of the state who desired to attend high school, and the fund could be apportioned so as to strengthen the country high schools. Until, however, a general survey of conditions in the state has been completed, we are not prepared to go further than to suggest that the plan of a county high school fund is well worthy of consideration.

5. We believe the law relating to the issuance of special certificates should be amended in order to meet the needs for special teachers of vocational subjects and modern languages. Due care should, however, be exercised to maintain a high standard of general scholarship for all teachers who are to give instruction in the public schools of the state.

6. The teachers' retirement salary law is on trial, but we believe the general sentiment of the teachers of the state is that it is a most beneficial measure and is working efficiently. Numerous amendments to the law have been suggested and will be considered by this Board as the law is more fully tested by actual administration. It is the

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opinion of this committee that it is unwise at this time to attempt any general revision of the act.

7. The free textbook law is also on trial, and we doubt the wisdom of attempting any revision of it until its provisions have been more fully tested by actual administration. The principal criticism has been on the slowness with which the books were provided at the beginning of the last school year. This was due entirely, however, to the fact that the law became operative immediately upon its passage and it was a physical impossibility to manufacture the books in the State Printing Office as rapidly as was necessary to meet the immediate operation of the law. Books have now been accumulated in sufficient numbers so that all orders are being promptly met.

The present plan of distribution is efficient and satisfactory, but the great problem is the enforcement of economy and care in the use of the books after they go into the hands of the pupils. This is a matter, however, that must be worked out by the local school authorities and the ultimate responsibility rests with the teacher and the children. There should be no wasteful use of books simply because they are free. Every county and city superintendent and every teacher should remember and should impress on the children the fact that the state textbooks cost the taxpayers of the state a large amount of money and should be used as if they were paid for directly instead of indirectly by the parents.

8. In view of the fact that there are many children attending the public schools of the state of such physical and mental variation that they are a cause of retardation in the regular classes, we recommend that these be taught in separate classes and given special instruction suited to their needs.

9. Among the data now in the hands of this committee for use in drafting or suggesting legislation along the lines indicated are a report from the Legislative Reference Bureau upon those matters submitted to it by this Board regarding suggested new legislation and the correction of certain clerical errors in the present school laws; suggested amendments making legal provisions for the establishment of intermediate schools, their courses of study and accreditation of teachers for the same; suggested legislation encouraging the establishment of vocational schools, providing their course of training and the basis for accreditation of their teachers; a tentative provision for an adequate library fund in cities, specific amendments to provide for the instruction of children physically and mentally unable to keep up with the regular classes; suggestions for better supervision and encouragement of the rural schools as well as abundant data toward revising and correcting the school law in the event that a constitutional convention is not called

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in the near future and the work of codification is undertaken by this Board.

The policy of this committee is at this time one of conservatism and caution rather than enthusiastic haste to make sweeping changes and revolution. It is a policy of evolution born of the conviction that California is a state of large area with varied conditions to be considered when attempting to expand and unify its school system, and is, moreover, a state which is already in the forefront of states in matters of education. These two considerations prompt us to only the most rational legislation, which is, at the same time, widely beneficial to the end that the public school of California shall continuously go forward and not backward.

10. In compliance with Senate Resolution No. 8, directing the State Board of Education to investigate the conditions surrounding and affecting the orphan children of the state, the education and training they receive, and to make recommendation regarding the same, the Legislative Committee has consulted the biennial reports of the State Board of Charities and Corrections, these reports being the most available and authoritative. From the report of that Board, 1911–1912, much information has been obtained concerning the numbers of children in orphan asylums receiving state aid, July, 1912, and the school facilities offered by each institution. Since, however, the report for the years 1913–1914 will soon be available, the committee wishes to secure this later information before making definite recommendation in this matter. There can be no question that both economy and humanity demand that these helpless wards of the state should be afforded adequate educational and vocational training necessary to good citizenship.

AGNES RAY, *Chairman.*
E. P. CLARKE.
MARSHALL DEMOTTE.

REPORT OF THE COMMITTEE ON LIFE DIPLOMAS AND DOCUMENTS.

The work of this committee has been very simple and is merely a ratification of recommendations made by the county board of education of each county in the state. There is a specific provision of the law governing the method by which a teacher may secure a life diploma of the different grades issued or a document. The requirements are clearly set forth, and the application reaches this committee only when in complete form.

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Each application has been carefully checked by this committee, and upon recommendation the State Board of Education has granted during the period closing June 30, 1914, the following diplomas and documents:

Kind	No.
High school life diplomas	135
Grammar school life diplomas	601
Kindergarten-primary life diplomas	20
Special life diplomas	41
New issue life diplomas	1
Normal documents	40
Total	838

Under the law a fee of $2 is required from each applicant; the total amount received from applicants during the period above named was $1,674, and the amount expended in furnishing the diplomas and documents was $1,507.60.

LAWRENCE E. CHENOWETH, *Chairman.*
MARY G. BARNUM.
E. P. CLARKE.

REPORT OF THE RETIREMENT SALARY FUND COMMITTEE.

The Committee on Retirement Salary Fund presents the following report:

The work of the committee commenced at the first meeting of the Board after its appointment, namely, on September 10, 1913. Under the new law it was necessary to prepare forms and books of record to carry on the work of the Board effectively. An expert was detailed by the Board of Control to prepare the system of books and blanks needed. Numerous points in the new law were referred by the Board to the Attorney General for an opinion before proceeding with the enrollment of those entitled, under the law, to retirement salary. Considerable time was required to prepare for this important work, and not until the meeting of the Board in March, 1914, was it possible to begin an enrollment of teachers entitled to retire under the new law.

Since that date, 212 names have been enrolled—42 men and 170 women. Of this number, 73 were received from the organization in San Francisco and 9 from the association in Alameda County, both established under the law approved March 26, 1895. Two of these annuitants have died since this enrollment began. With this list of

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annuitants from San Francisco and Alameda counties, the sum of $58,700.79 was received and placed in the Public School Teachers' Permanent Fund, in compliance with section 21 of the law creating this Board.

The revenues of the Board under the law have been ample, thus far, to supply the demands upon the fund. The receipts to July 1, 1914, have been as follows:

From San Francisco and Alameda counties (annuity funds)	$58,700 79
From taxes collected under the inheritance tax law	79,343 75
From monthly payments by teachers, several counties not having reported	55,934 25
From other sources	3,768 90

The disbursements to July 1, 1914, have been as follows:

Payment of retirement salaries	$35,984 69
Cost of books, blanks and other expenses attending the organization of the work	1,226 00
Office expense, clerical help, etc.	2,238 67

These figures will show only a part of the first year and can therefore have little value in forming estimates for the future. With the records of a complete year, it will be practicable to present a much fuller report. The system of bookkeeping will then be completed and a satisfactory statement will be possible.

On the whole, the administration of the act has been attended, thus far, with very little complication or dissatisfaction. Questions have naturally arisen concerning rules for conducting the business of the Board, but in view of the lack of precedent and the necessity for creating new rules, more rapid progress has been deemed unwise.

The coöperation of the teachers in the matter of accepting the benefits of the act and complying with its requirements, has been general. The law seems to be working satisfactorily.

We append herewith a list of teachers receiving the retirement salary, also tables showing the collections for Teachers' Permanent Fund, and another table showing the amount of salary paid in each county.

Respectfully submitted,

GEORGE W. STONE, *Chairman.*
AGNES RAY.
MARSHALL DEMOTTE.

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TABLE NO. 1.

List of Annuitants, July 1, 1914.

Name	Years	Annual salary
Amick, Daniel B.		$500 00
*Armstrong, Mrs. Flora	27	450 00
Ashley, Ella E.		500 00
Ayer, Hattie G.		500 00
Ayers, Amos M.		500 00
Ayres, Mary J.		500 00
Banning, Mrs. F. A.		500 00
*Barrows, Miss L. M.	26	433 33
Barry, Charlotte M.		500 00
Bentley, Miss L. E.		500 00
Betancue, Mrs. Lizzie C.		500 00
Bills, Rebecca Allen		500 00
Black, Samuel T.		500 00
Blanchard, Jamie Maud	22	366 66
Blood, Mrs. Frances E.		500 00
Boyle, Mary		500 00
Bradbury, Mrs. Marcia G.		500 00
Bradbury, Miss V. E.		500 00
Brigham, Alma S.		500 00
Brodbeck, Mrs. Kate		500 00
Brooks, Elisha		500 00
Brooks, James M.		500 00
*Brooks, Miss Lina M.	21	350 00
Brown, James B.		500 00
Browne, Esther		500 00
Burdg, Mrs. Ida M.		500 00
*Burnham, Miss L.	22½	375 00
Campbell, Anne B.		500 00
Campbell, Miss A. T.		500 00
Campbell, Miss R. G.		500 00
Candee, Katherine H.		500 00
*Canham, Miss M. J.	28	466 66
Carson, Elizabeth		500 00
Carson, Miss M. E.		500 00
Chandler, Joseph F.		500 00
Childs, Miss K. B.		500 00
Chinn, Mrs. B. A.		500 00
*Claiborne, Miss R. V.	20	333 33
Clark, Jacob S.		500 00
Code, Emma S.		500 00
Cohen, Alice H.		500 00
Colby, Phoebe S.		500 00
Conover, Flora		500 00
Cooney, Katherine M.		500 00
Cornell, Mrs. R. J.		500 00
Cowan, Mary Phelps		500 00
Crawford, T. O.		500 00
Currier, Mrs. M. H.		500 00
Curtis, Corinna M.		500 00
*Curtis, Mrs. Mary W.	26	433 33
Dake, Mrs. Laura M.		500 00
Danks, Julia A.		500 00
Denton, Joey		500 00
Dow, Mrs. Eliza V.		500 00
Driscoll, Kate		500 00
Driver, Mrs. Susie M.		500 00
DuBois, Mrs. C. G.		500 00
*Dunn, Catherine E.	29	483 33
Dwyer, Mrs. Margaret		500 00
Early, Mrs. Amelia C.		500 00

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TABLE No. 1—Continued.

List of Annuitants, July 1, 1914.

Name	Years	Annual salary
Edwards, W. H.		$500 00
Effey, Agnes		500 00
Elder, Elva R.		500 00
Farrell, Mary F.		500 00
*Fay, Rose	22	366 66
Ford, Howard		500 00
Fowler, Laura T.		500 00
*Freeman, Mrs. Frances	15	250 00
French, Sarah T.		500 00
Fuller, Eugenie		500 00
*Gallagher, Annie M.	28	466 66
Garlick, J. P.		500 00
Gates, Alice A.		500 00
Gibbs, Ellen		500 00
Gleason, Mrs. Orie B.		500 00
*Goggin, Emily	29	483 33
Goldsmith, Bertha		500 00
Goodell, George		500 00
Gorman, Miss J. B.		500 00
Grant, Miss E. G.		500 00
Gregg, Alice C.		500 00
Griffith, Mrs. A.		500 00
Ham, Charles H.		500 00
Hamaker, Mary E.		500 00
Hamilton, James T.		500 00
Hart, Christine		500 00
*Hart, Lydia	22	366 66
Haskett, Miranda		500 00
Haswell, Nellie C.		500 00
Hawkins, Mary E.		500 00
Hazleton, Mrs. R. H.		500 00
Heney, Miss E. S.		500 00
Herbert, Thomas L.		500 00
*Hertz, Regina	24	400 00
Hill, Annie A.		500 00
Hopkins, Mrs. L. T.		500 00
Hunt, Caroline L.		500 00
Huntley, Antoinette M.		500 00
Hurley, Mrs. Mary E.		500 00
*Ingram, Stella J.	24	400 00
Jacobs, Miss R.		500 00
Johnston, Miss C. M.		500 00
Keran, A. P.		500 00
King, Jessie I.		500 00
*Kollmyer, Kate A.	16	266 66
Lambert, D.		500 00
Lemmon, Albert P.		500 00
Lillibridge, Clara		500 00
Lindberg, Emily U.		500 00
Long, Mrs. Orpa A.		500 00
Loucks, Annie		500 00
†Love, Mrs. Josephine		500 00
MacDonald, Alexander H.		500 00
*MacLean, Mrs. Flora M.	18	300 00
Mahoney, Margaret J.		500 00
Mains, Belle		500 00
March, Addie		500 00
Mason, Mrs. Leola I.		500 00
Mayborn, Mrs. Mary J.		500 00
McAllen, Margaret E.		500 00

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TABLE No. 1—Continued.

List of Annuitants, July 1, 1914.

Name	Years	Annual salary
McCarty, John L.		$500 00
McClymonds, John W.		500 00
McColgan, Miss K. F.		500 00
McComas, Mrs. Mary G.		500 00
McConnell, Miss Q. O.		500 00
*McGinnis, Mrs. E. M.	27	450 00
McKenna, Edward		500 00
McKennon, Mary L.		500 00
McLean, Mary Helen		500 00
McLeod, Edith		500 00
McNair, Martha J.		500 00
McPhail, Mrs. Ella		500 00
Meredith, Charles T.		500 00
Merwin, C. E.		500 00
*Miley, Annette	28	466 66
*Miller, Emma J.	22	366 66
Moores, C. W.		500 00
*Morrison, Mrs. Annie L.	19	316 66
Mullen, Harriette M.		500 00
Newberry, Mrs. Carrie J.		500 00
Nicholl, Mrs. T. C. Stohr		500 00
Norman, Nellie M.		500 00
*O'Hara, Kate	27	450 00
Oliver, Mrs. Lena Blumb	19	316 66
O'Loughlen, Nellie		500 00
Osborn, Charles V.		500 00
Paris, Mrs. Alice C.	25½	425 00
Parker, Jean		500 00
Patterson, Miss I.		500 00
*Pearce, Maud M.	24	400 00
Peck, Kate E.		500 00
Pettigrew, Miss E. R.		500 00
Phelps, Josephine Hart		500 00
Phillips, Mrs. Anna M.		500 00
Playter, Georgia B.		500 00
Powell, Elizabeth		500 00
Power, Thomas W.		500 00
*Raclet, Miss V. M.	27	450 00
*Raymond, Helen A.	15	250 00
Reardon, William H.		500 00
Reynolds, Mrs. Elise D.		500 00
Richards, Cornelia		500 00
Rubell, C. F.		500 00
*Seabrook, Mrs. N.	21	350 00
Simon, Malvina		500 00
Simpson, Henrietta C.		500 00
Slavan, Miss A. E.		500 00
Smith, C. S.		500 00
*Smith, Miss M. A.	20	333 33
*Smith, Mrs. Margaret K.	27	450 00
*Smith, Mrs. Mary H.	17	283 33
Solomon, Miss M.		500 00
Soule, Miss F. L.		500 00
Spaulding, Mary S.		500 00
Sprott, Madge		500 00
Stallman, Miss N. C.		500 00
Stinson, Mrs. Margaret		500 00
Stone, Martha		500 00
Stout, George H.		500 00
*Sutherland, Miss A. M.	18	300 00

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TABLE No. 1—Continued.

List of Annuitants, July 1, 1914.

Name	Years	Annual salary
Sutphen, Albert W.		$500 00
Taylor, Mrs. A. C.		500 00
Taylor, Jefferson		500 00
Templeton, Miss L. S.		500 00
Thomas, Flora M.		500 00
*Thurston, Margaret	21	350 00
Tilson, James R.		500 00
Troyer, Mrs. V.		500 00
Turner, Henry F.		500 00
*Turney, Katherine	20	333 33
Walden, Mrs. A. C.		500 00
Walker, Lucy A.		500 00
Walker, Charles J.		500 00
Walsh, Adele		500 00
Walsh, Margaret		500 00
Walton, Adaline E.		500 00
Warren, George W.		500 00
†Waters, Mrs. Kate		500 00
Webster, R. H.		500 00
Wheeler, Mary L.		500 00
Whirlow, Miss H. E.		500 00
Whitcomb, Mrs. E. M. North		500 00
White, Mrs. M. A.		500 00
White, T. B.		500 00
Williams, Walter J. G.		500 00
Williamson, Ethel L.		500 00
Winn, A. T.		500 00
Wise, Mrs. Elizabeth S.		500 00
Vollmar, Bertha T.		500 00
*Young, Sara R.	22	366 66
Zimmermann, William		500 00

NOTE—All teachers whose length of teaching service is not shown, have been retired on thirty or more years of teaching.

*Retired for incapacity for further school service, upon less than thirty years of service.

†Deceased.

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TABLE NO. 2.

Collections for Teachers' Permanent Fund for Period Ending June 30, 1914.

County	Amount
Alameda	$6,161 25
Alpine (none paying)	
Amador (incomplete)	22 00
Butte	1,016 00
Calaveras (no report)	
Colusa	534 75
Contra Costa	1,200 00
Del Norte	128 00
El Dorado	375 00
Fresno	3,953 00
Glenn (incomplete)	179 00
Humboldt	848 50
Imperial	632 00
Inyo	83 00
Kern	
Kings	531 00
Lake	284 25
Lassen (incomplete)	241 00
Los Angeles (no report)	
Madera	457 00
Marin (no report)	
Mariposa	158 00
Mendocino	768 68
Merced (incomplete)	354 50
Modoc	403 90
Mono (incomplete)	39 50
Monterey	580 25
Napa	581 00
Nevada	387 00
Orange	610 00
Placer (incomplete)	315 00
Plumas	78 00
Riverside	1,659 00
Sacramento (incomplete)	1,081 00
San Benito	233 00
San Bernardino	2,046 60
San Diego	2,328 00
San Francisco	13,370 35
San Joaquin	1,429 00
San Luis Obispo	432 50
San Mateo	1,023 00
Santa Clara	1,569 00
Santa Barbara	1,069 50
Santa Cruz	1,040 00
Shasta	474 00
Sierra	91 00
Siskiyou	722 00
Solano	963 00
Sonoma	1,307 00
Stanislaus (no report)	
Sutter	325 00
Tehama (no report)	
Trinity	80 00
Tulare	2,038 00
Tuolumne	249 00
Ventura	844 00
Yolo	368 00
Yuba (incomplete)	204 00
Total	$55,934 25

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TABLE NO. 3.

Residence of Annuitants by Cities and Counties, With Amount Necessary to Pay Their Retirement Salaries for the Fiscal Year, 1914-1915.

	Number of annuitants	Amount
City—		
Alameda	7	$2,470 00
Berkeley	9	2,830 00
Eureka	2	386 66
Oroville	1	210 00
Los Angeles	12	3,059 66
Oakland	22	8,527 00
Pasadena	3	1,004 00
San Francisco	72	30,373 05
San Rafael	1	260 00
Santa Ana	1	260 00
Riverside	4	1,040 00
San Diego	5	1,590 00
Stockton	2	581 00
San Luis Obispo	2	336 66
Santa Barbara	1	260 00
San Jose	3	740 00
Palo Alto	2	866 66
Santa Cruz	2	706 00
Vallejo	1	260 00
Santa Rosa	1	260 00
County, outside above cities		
Alameda	3	1,027 00
Amador	1	260 00
Calaveras	1	260 00
Colusa	1	260 00
Contra Costa	2	760 00
El Dorado	1	260 00
Fresno	2	303 33
Humboldt	1	260 00
Kern	1	260 00
Kings	1	260 00
Lassen	1	500 00
Los Angeles	1	260 00
Marin	2	1,000 00
Mendocino	1	260 00
Monterey	1	260 00
Napa	1	260 00
Placer	2	520 00
Riverside	1	260 00
Sacramento	1	630 00
San Bernardino	1	260 00
San Diego	2	520 00
San Joaquin	2	1,000 00
San Luis Obispo	2	470 00
San Mateo	3	1,500 00
Santa Clara	2	637 10
Santa Cruz	1	500 00
Shasta	3	596 66
Siskiyou	1	260 00
Solano	3	780 00
Sonoma	2	270 00
Stanislaus	1	260 00
Tehama	1	260 00
Tulare	2	520 00
Non-residents	2	692 00
Totals	150	$75,606 78

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State Capitol.

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PART III.

REPORT OF SECRETARY.

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LETTER OF TRANSMITTAL.

The State Board of Education,
Sacramento, California.

LADIES AND GENTLEMEN:

I have the honor to submit the following tabular statements containing résumés of the statistics gathered by the office of the Superintendent of Public Instruction for the two years extending from July 1, 1912, to June 30, 1914, together with some generalizations and observations drawn therefrom, in accordance with section 1518, subdivision fourth (*d*), of the Political Code.

Very respectfully yours,

EDWARD HYATT,
Superintendent of Public Instruction and ex officio Secretary of State Board of Education.

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GENERALIZATIONS.

The biennial period ending June 30, 1914, the period covered by this report, has been one of great educational activity, rapid growth and sweeping changes.

Free Textbooks.

The first change we have to note is in the method of furnishing textbooks. Formerly textbooks for the elementary schools were sold by the state to the children at cost.

At the election held November 5, 1912, the people by a very decisive vote amended the constitution so that the state should manufacture and deliver free to the children in the elementary schools all textbooks used in such schools. This amendment also carried with it a provision that the legislature should provide for a state board of education "by election or appointment" in place of a board named in the constitution, which latter provision had been in force since 1872.

An opinion of the attorney general, Hon. U. S. Webb, was to the effect that the amendment providing for free textbooks went into effect at once; that the superintendent of public instruction must take the place of the state board of education until the new board was provided for; that he should order the textbooks manufactured and proceed to distribute them free to the children in the elementary schools.

With no funds to meet the expense of such undertaking, and no similar system in existence to serve as a guide, the task of making plans to meet the demands of the schools was taken up. The state printing office was taxed to its full capacity to manufacture books and take care of the printing required by the legislature and by all of the state officers and commissioners.

Immediately after the organization of the legislature an emergency appropriation was passed to meet the expenses of the shipment of these books. A second act was passed allowing the money in the state school book fund to be used for the payment of the manufacture of the books. The shipment of the free textbooks began January 15, 1913, by a lot sent to Superintendent Will C. Wood of the city of Alameda. As rapidly as books could be printed, they were sent to all parts of the state. A full report of the books sold and the books sent free will be found on pages 85 to 90, inclusive, of this report.

School Legislation.

The legislature of 1913 was one long to be remembered for the great amount of legislation enacted. There were 1,783 bills introduced in the senate, an average of 44.5 to the member, and 2,139 introduced in the assembly, about 26.6 per member. Of this mass of proposed legislation about 360 bills related to education.

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Kindergartens.

A bill having for its purpose the encouragement of the organization of kindergartens was passed, and became a law of this state as section 1617c of the Political Code. The bill as originally drafted embodied a demand that kindergarten classes, instead of being regarded as local in character, should be recognized as a part of the state school system and given state aid. However, the educational committees having this matter in charge did not accept this view. Since kindergarten classes can thrive only in populous districts amply able to support them, the committee felt that the state should devote its energies to the encouragement of the elementary schools in which all children have a common interest.

The same end as giving state aid to the kindergartens may be reached by giving more aid to the elementary schools and leaving the localities to devote more of their money to the special school, such as the kindergarten, and the more practical work of the vocational schools. That the kindergarten school thrives best in large cities is shown by the fact that twenty-four cities in this state maintain these schools, nine of these cities being in Los Angeles County.

Elementary Schools.

In the kindergarten, elementary and high schools there are 501,021 pupils enrolled. Of this number 13,070 or 2.6 per cent are in the kindergartens; 422,024 or 84.3 per cent are enrolled in the elementary schools; while 65,927 or 13.1 per cent are in the high schools. All children must benefit from the elementary schools. It should be plain that this is the school that is common to all. Those who would enter the high school must have passed through the elementary schools. It is evident that the state should aid the elementary schools in preference to other schools since all children enjoy the benefits of these schools. The following table will show the gain in these schools and the proportion of state aid to local aid:

	1907	1914	Gain per cent
Number of teachers	8,246	12,266	48
Number of pupils enrolled	294,385	422,024	43
Average daily attendance	234,624	319,229	36
Number enrolled per teacher	35.7	33	--------
Number of graduates	12,683	24,780	92
Amount of state aid given	$3,977,295 40	$5,358,579 04	35
Amount of county aid given	2,866,479 17	4,960,197 76	73
Amount of district aid given (special taxes)	937,001 16	4,591,921 29	390
Amount of bonds voted for buildings, etc.	1,374,395 58	3,267,805 05	130

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These figures show that the county has increased its aid to the schools more than twice as much as has the state, and that the district has increased its aid more than ten times as fast as the state, in addition to the bonds that have been voted for buildings and grounds. In addition the districts have reported that, in 1907, $163,618.31 was received under the head of miscellaneous receipts or donations, while in 1914 this money reached the sum of $356,898.66, or a gain of 118 per cent.

It would seem from the above table that the law should be so amended as to give more state and more county aid to the elementary schools, and that the burden is falling too heavily on many districts. The more wealthy sections of the state can give this local aid, while the less fortunate sections can not. The results are that the population is tending more and more towards the city, where these educational advantages can be had. The amount of state aid as reported above will be decreased by nearly $900,000 in the voting out of the poll tax in the fall of 1914. This will increase the burden on localities. To partly offset this loss the state should give at least three dollars per pupil on average daily attendance, making the rate per pupil transferred from the general fund of the state $16 in place of the $13 now given. This would replace loss of poll tax. But in order to keep pace with the rapid development of the educational interests of the state, not less than $18 per pupil should be given.

High Schools.

The following table will show the wonderful increase in the high schools of California for the eight years from 1907 to and including 1914. The rise of the high school is one of the most remarkable educational movements of modern times:

	1907	1914	Gain per cent
Number of schools	179	255	43
Number of teachers	1,188	2,997	152
Number of pupils enrolled	27,578	65,927	139
Average daily attendance	22,333	48,312	116
Number of graduates	2,890	7,477	158
Amount of state aid given for year	$237,016 77	$642,815 52	171
Amount of district aid given	2,026,685 26	5,506,429 22	172
Amount of bonds voted	429,576 50	1,893,657 00	341

It will be noted by the fact that the number of graduates has gained 158 per cent, while the enrollment has gained 139 per cent, that the high schools now are holding their pupils longer than formerly.

The law providing state aid to high schools adjusts itself to the rapid growth of the schools far better than does the law providing aid to the elementary schools. It will be noticed that the state aid to high schools

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has gained 171 per cent, while district aid has gained 172 per cent. But the districts gave $2,026,682.26 for 1914, while the state gave but $237,016.77, the district giving towards the support of the school 8.6 times as much as did the state, in addition to building the schoolhouse.

The crying need of the high school is legislation that will prevent too frequent changes in the course of study, so that students, when they enter the school, may outline their course and follow it through without reference to changes in teachers and principal. There is need also for a more adequate law to prevent too frequent changes in high school textbooks. These books are so expensive that changes should be made only for good reasons. It is unreasonable to require parents to purchase a complete new set of books for each child when several children of the family enter school in successive years and elect the same course. If we can have fewer changes in high school textbooks, those whose duty it is to adopt them will consider the books more carefully before adopting them.

In many of the high schools the course of study is made to conform to the subject which the teachers can teach. In consequence, the students are compelled to make changes in their course to suit the change made by the introduction of the new teacher. It would be better for high school boards to select teachers to teach a course of study such as the district needs, than to select teachers and then make a course of study to fit the capabilities of the faculty.

Normal Schools.

The following table will show the rapid development of the state normal schools:

	1907	1914	Gain per cent
Number of schools	5	8	60
Number of teachers	116	229	98
Number of students in normal proper	1,769	3,994	126
Number of pupils in training school	2,109	3,068	45
Number of graduates	478	1,538	222
Total receipts	$415,012 46	$1,056,998 51	154
Total expenditure	274,785 71	516,389 90	81
Valuation of property	1,149,766 00	2,392,214 00	108

When the first state normal school was created the question of system could not enter, but as normal schools have been created one after another till we have eight state normal schools, the question of a state system of normal schools that should govern all of them has become increasingly important. The tendency has been to make each normal school a local school with its own conditions of entrance, its own course of study, and its own system of teaching. The legislature has under-

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taken to meet this condition by providing for a joint normal board, composed of the various normal presidents with certain of their trustees. By reason of the inherent difficulties of the situation, this joint board has not been able to make much headway up to the present time in the way of unifying or harmonizing the work of the different schools.

DIRECTORY.

STATE BOARD OF EDUCATION.

(Appointed by the Governor.)

Name of member	Term expires	Address
Wm. H. Langdon	August, 1917	Modesto.
Mrs. O. Shepard Barnum	August, 1917	312 S. Fifth St., Alhambra.
Mrs. Agnes Ray	August, 1916	272 Twenty-third St., Oakland.
George W. Stone	August, 1916	Santa Cruz.
Marshall De Motte*	August, 1915	Corning.
Lawrence E. Chenoweth	August, 1915	Bakersfield.
E. P. Clarke	August, 1914	Riverside.

*Appointed to fill term left vacant by resignation of Chas. F. Stern of Eureka.

NOTE.—Edward Hyatt, Superintendent of Public Instruction, is Secretary of the Board according to law.

Assistant Superintendents of Public Instruction.

(Appointed by State Board of Education. Took office January 1, 1914.)

Edwin R. Snyder, Commissioner of Vocational Education.....Santa Barbara
Will C. Wood, Commissioner of High Schools.....Alameda
Margaret E. Schallenberger, Commissioner of Elementary Schools.....San Jose

Employees of State Board of Education.

C. S. Pixley, Chief Clerk.....Sacramento
Anne M. Nicholson Textbook Expert Assistant.....San Jose
Mrs. Florence Argall, Stenographer.....Sacramento
Miss Agnes Loofbourrow, Stenographer.....Sacramento
Miss Jennie Bickford, Clerk.....Sacramento

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COUNTY SUPERINTENDENTS OF SCHOOLS.

(Term expires January 3, 1915.)

County	Name	Address
Alameda	Geo. W. Frick	Oakland
Alpine	Mrs. E. A. Grover	Markleeville
Amador	W. H. Greenhalgh	Jackson
Butte	Mrs. Minnie Abrams	Oroville
Calaveras	Frank Wells	San Andreas
Colusa	Mrs. F. M. Rhodes	Colusa
Contra Costa	W. H. Hanlon	Martinez
Del Norte	Jos. M. Hamilton	Crescent City
El Dorado	S. B. Wilson	Placerville
Fresno	E. W. Lindsay	Fresno
Glenn	S. M. Chaney	Willows
Humboldt	George Underwood	Eureka
Imperial	L. E. Cooley	El Centro
Inyo	Mrs. M. A. Clarke	Bishop
Kern	Robert L. Stockton	Bakersfield
Kings	Mrs. N. E. Davidson	Hanford
Lake	Hettie Irwin	Lakeport
Lassen	W. B. Philliber	Susanville
Los Angeles	Mark Keppel	Los Angeles
Madera	Craig Cunningham	Madera
Marin	Jas. B. Davidson	San Rafael
Mariposa	J. L. Dexter	Hornitos
Mendocino	L. W. Babcock	Ukiah
Merced	Margaret Sheehy	Merced
Modoc	Mrs. Nettie B. Harris	Alturas
Mono	Mrs. Cordelia Hays Dolan	Bridgeport
Monterey	A. J. Hennessy	Salinas
Napa	Mrs. Margaret M. Ferguson	Napa
Nevada	R. J. Fitzgerald	Nevada City
Orange	R. P. Mitchell	Santa Ana
Placer	Preston W. Smith	Auburn
Plumas	Mrs. M. A. Hail	Quincy
Riverside	Raymond Cree	Riverside
Sacramento	Mrs. Minnie O'Neil	Sacramento
San Benito	W. J. Cagney	Hollister
San Bernardino	A. S. McPherron	San Bernardino
San Diego	Hugh J. Baldwin	San Diego
San Francisco	Alfred Roncovieri	San Francisco
San Joaquin	John W. Anderson	Stockton
San Luis Obispo	W. S. Wight	San Luis Obispo
San Mateo	Roy W. Cloud	Redwood City
Santa Barbara	Mamie V. Lehner	Santa Barbara
Santa Clara	D. T. Bateman	San Jose
Santa Cruz	Champ S. Price	Santa Cruz
Shasta	Mrs. Lulu White Osborn	Redding
Sierra	Belle Alexander	Downieville
Siskiyou	Willis H. Parker	Yreka
Solano	D. H. White	Fairfield
Sonoma	Florence M. Barnes	Santa Rosa
Stanislaus	Florence Boggs	Modesto
Sutter	H. W. Helken	Yuba City
Tehama	Delia D. Fish	Red Bluff
Trinity	Mrs. Minnie Aldrich	Weaverville
Tulare	J. E. Buckman	Visalia
Tuolumne	G. P. Morgan	Columbia
Ventura	Jas. E. Reynolds	Ventura
Yolo	Mrs. J. A. Henshall	Woodland
Yuba	William P. Cramsie	Marysville

County Superintendents are Secretaries of their respective County Boards of Education.

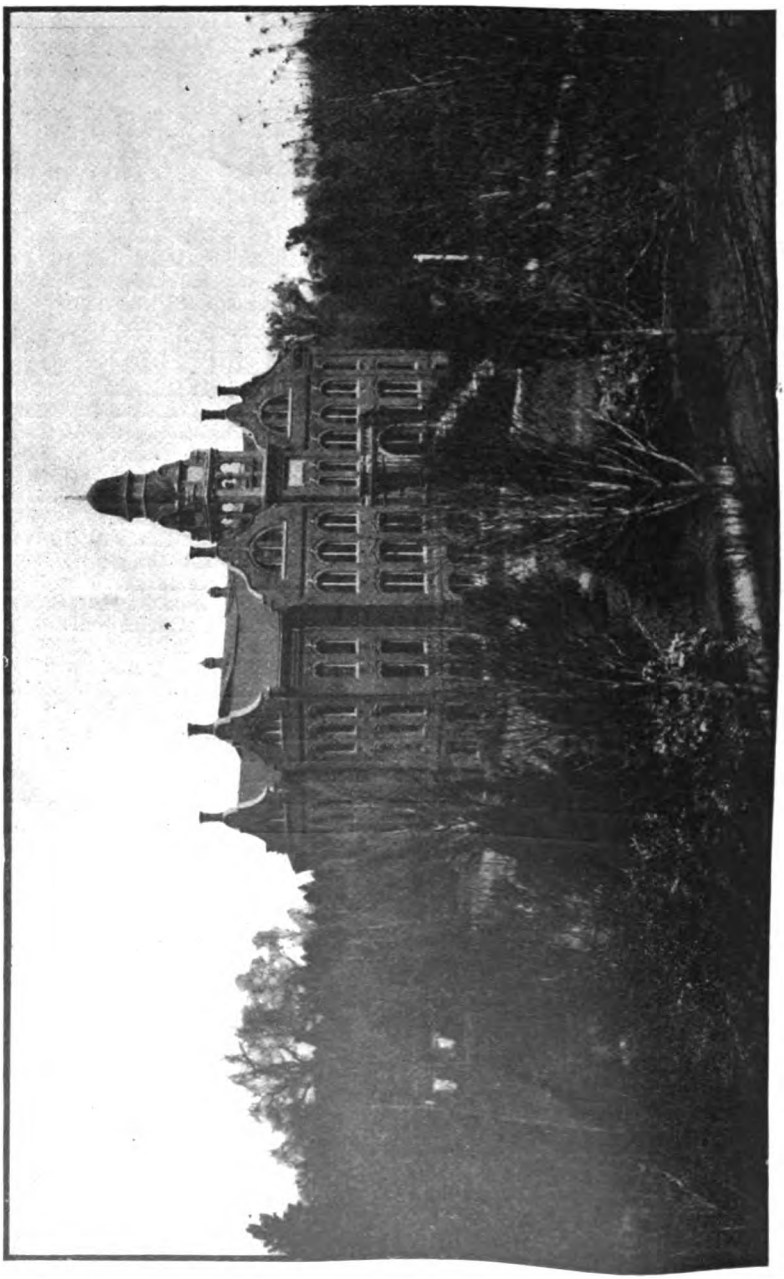
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CITY SUPERINTENDENTS OF SCHOOLS.

(Term four years from date of appointment.)

City	County	Name of superintendent
Alameda	Alameda	C. J. Du Four
Bakersfield	Kern	D. W. Nelson
Berkeley	Alameda	M. C. James
Chico	Butte	Chas. H. Camper
Eureka	Humboldt	N. B. Van Matre
Fresno	Fresno	C. C. Starr
Long Beach	Los Angeles	W. L. Stephens
Los Angeles	Los Angeles	J. H. Francis
Marysville	Yuba	Wm. P. Cramsie
Modesto	Stanislaus	Thos. Downey
Oakland	Alameda	A. C. Barker
Oroville	Butte	H. P. Short
Palo Alto	Santa Clara	J. C. Templeton
Pasadena	Los Angeles	J. M. Rhodes
Pomona	Los Angeles	W. R. Murphy
Richmond	Contra Costa	W. T. Helms
Riverside	Riverside	A. N. Wheelock
Sacramento	Sacramento	C. C. Hughes
Salinas	Monterey	L. E. Kilkenny
San Bernardino	San Bernardino	F. W. Conrad
San Buenaventura	Ventura	A. L. Vincent
San Diego	San Diego	Duncan MacKinnon
San Jose	Santa Clara	Alex Sherriffs
San Luis Obispo	San Luis Obispo	A. H. Mabley
San Rafael	Marin	David R. Jones
Santa Ana	Orange	J. A. Cranston
Santa Barbara	Santa Barbara	A. C. Olney
Santa Cruz	Santa Cruz	J. W. Linscott
Santa Monica	Los Angeles	Horace M. Rebok
Santa Rosa	Sonoma	T. F. Brownscombe
Stockton	San Joaquin	Ansel S. Williams
Tulare	Tulare	W. T. Walton
Vallejo	Solano	G. V. Whaley

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Chico State Normal School.

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PART IV.

REPORTS OF COMMISSIONERS.

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LETTER OF TRANSMITTAL.

SACRAMENTO, CALIFORNIA, September 1, 1914.

The Honorable STATE BOARD OF EDUCATION,
Sacramento, California.

LADIES AND GENTLEMEN:

In compliance with the state law of California—Political Code, section 1519—I have the honor to submit to you the first annual report of the Commissioner of Elementary Schools. Since the duties of this office were assumed January 1, 1914, the report necessarily is limited in time to that portion of the year beginning January 1st and closing June 30th.

Very respectfully yours,

MARGARET E. SCHALLENBERGER,
Commissioner of Elementary Schools.

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FIRST ANNUAL REPORT.

THE OFFICE.

The elementary teachers of the State of California number 12,266. Variation in the efficiency of the schools taught by these teachers is marked. Some of the schools are poorly taught, some have slender courses of study, some house the children in unsanitary buildings and furnish meager equipment, while others leave little to be desired in any of these respects. Therefore equal opportunity is not provided for all the children of the state.

State superintendents, county superintendents, city superintendents, members of boards of education, faculties of state normal schools, and professors in the departments of education of the University of California and of Leland Stanford Jr. University have each and all proved their worth in aiding in the direction and supervision of the work of elementery education, but the activities of each and all are limited by manifold and increasing duties and interests, some of which lead away from, rather than toward, much that is of vital importance to the elementary schools.

The enactment of a law, therefore, approved June 6, 1913, providing for the employment of an official to be known and designated as the Commissioner of Elementary Schools, committed to work in the interests of this particular field of education, who shall visit the elementary day and evening schools of the several counties of the state, investigate the courses of study, report his findings and make recommendations to the State Board of Education, is virtually a recognition by the people of the necessity for more and special attention to the elementary schools; and the wording of the law defining the duties of the office imposes an inferred obligation on the part of the state officer employed to use continually all possible diligence and effort in bringing about action for the improvement of these schools.

This does not mean that the Commissioner is to work alone, unaided by those co-operative agencies which have proved and are proving extremely valuable, but rather that with and through these agencies and others which may be brought into action, the central state office may be instrumental in strengthening, enriching and unifying the elementary school system to the end that it may more completely serve the interests of the state.

With this understanding of the meaning and function of the office, the Commissioner of Elementary Schools entered upon her duties January 1, 1914.

ELEMENTARY SCHOOL CONDITIONS.

Exclusive of the children attending kindergartens, there are 402,024 boys and girls enrolled in the elementary schools of California; including the kindergarten children there are about 500,000. In comparison

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with this half million the total enrollment of the high schools, 65,927, appears strikingly small and thrusts into the foreground of consciousness with tremendous force the fact, recognized but not sufficiently dwelt upon, that the rank and file of our population are dependent for their start in life upon the knowledge, habits, productive power and ideals given them by the elementary school. Moreover, the ability of the favored 65,927 high school students to profit by the opportunities there offered is largely conditioned by the preparation obtained in the lower school, and even college graduates not infrequently trace certain of their inefficiencies or proficiencies either to inadequate or to adequate elementary training. Democratic, impartial, sympathetic, the doors of the elementary school swing open to all of the children of all of the people, and, because it begins at the beginning, it is the only school to which the whole half million are eligible. In view of these facts, its importance as a state institution can not be over-estimated or its possibilities over-emphasized. Not only should the elementary school offer the widest possible opportunity throughout the eight years of its course to each child pursuing it, but the nature of this course should be such that children beginning it are tempted to complete it and many thousands more than 65,927 should be given, between the ages of 6 and 14 years, an impetus which will carry them into high school. However, no matter what success may attend the effort to swell the high school enrollment, it is obvious that the most widely attended school of the people will always be the elementary school and many of the state's most intelligent and worthy citizens—indeed, many of its most valuable leaders in all fields of life's activity—will receive no other technical education than that which it offers.

So important have been the changes wrought by discoveries in science, so varied and complex are the life occupations, the interests and the means of service of the people, that the ideals and functions of the elementary school of today are quite unlike those of twenty or even ten years ago. Education is no longer the acquirement of a body of facts, but is dynamic in character, being carried on by means of various life experiences; and the problem before educators today is the determination of the value of these experiences. The laws of psychology, sociology, hygiene and ethics, therefore, are studied eagerly by the progressive teacher. The child must be taught to live sanely and must, through concrete experiences, become imbued with right ideas concerning the necessity for the support of himself and of others. At the same time appreciation of music, of art and of literature are recognized also as valuable life experiences.

Love of nature and command of nature's forces are both to be attained. Honor and loyalty, unselfishness, courage, diligence, thrift, generosity, the feelings of mercy, pity, brotherly love, and desire for service, to be taught, must be experienced. Opportunities must be

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given for these experiences. The two great forces conditioning all lives are heredity and environment. Each human being is what he is through and by means of heredity and environment, not what he would have been had his environment been different. Absolutely essential for the planning of his early education is the study by the teacher of the conditions under which the child's life experiences are in operation, and the determination of what those conditions ought to be is the modern educator's problem. Moreover, the school is truly performing its service only when it projects its efficiency into the home and makes possible the continuation of activities inaugurated but only partly carried out in the school.

Since the direction for the whole range of his life's activities is given to the child in the elementary school, the experiences planned for him there are of vital importance, and to be right, need certain provisions.

The State should provide good teachers. No teacher can be too well educated for work in the elementary school. Books no longer are the only tools of the elementary teacher. She must not only understand just what she is trying to accomplish through their use when they are used, but she must be able to lead the child into many an avenue to which no book provides an entrance. High standards of teaching qualifications for the teachers mean right life experiences for the citizens of the state, for the child's school experiences are truly a part, and a very important part, of his life experiences.

Expert supervision of these teachers is imperative. No individual in any field of activity who works alone, receiving neither help, suggestion nor recognition, does his best work.

Sanitary school buildings and school grounds, with room for play, comfortable and sanitary furniture, as beautiful too as may be, should be provided. The physical well-being of the state's citizens demands the former and their aesthetic appreciation as consumers the latter.

School and home gardens should flourish, much work of all kinds should be done with the hands; habits of thrift should be inculcated; libraries, that the library habit may function, should be in evidence.

These schools are often benefited by various influences which are brought to them by the people as the result of social, economic, ethical, scientific and artistic development. Among them are the moving picture, the phonograph and the school savings bank. The Commissioner has observed these agencies operating effectively in the elementary schools and believes that they well deserve the careful consideration of all teachers as direct educational agencies.

All of these and many other conditions offer opportunities by means of which our citizens will learn to find themselves.

Each child is a unit different from all other children, yet all children are alike. Mind patterns are different, mind material is common. With

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the state itself lies the responsibility of providing the conditions under which a system of education may be wrought out sufficiently simple to be the same for all the children, yet sufficiently complex to give each different unit his unique opportunities.

TEXTBOOKS.

As teachers increase in efficiency, the value of textbooks as factors in education is apt to be discounted. "The best teachers," it is often asserted, "need no textbooks." "Children tend to regard the statements of textbooks as beyond question and to depend upon them rather than upon themselves."

Undoubtedly there is truth in these criticisms, but, nevertheless, while schools exist we shall have textbooks, and, excellent as some textbooks are, none can be too good. California should have the best.

While it may be true that good teachers can more easily than poor ones dispense with a textbook, yet good teachers need them and use them to advantage. No good teacher feels hampered or limited by a good textbook.

Textbooks can be written and often are written in a way that stimulates rather than inhibits the thought of the child. It is the business of textbook publishers to keep in touch with present-day life conditions and progressive school ideals. If education means experiences rather than memorized statements, then textbooks must aid the teacher in providing experiences. If education is dynamic rather than static in its nature, then textbooks must lead the children to action. If education means increase of ability to appreciate, then textbooks must be a means to that end. If education is to result in social efficiency, then textbooks must be servants of social efficiency.

While a good textbook is an aid to the city teacher and the city child, it is a necessity to the rural teacher and the rural child. So far from regarding textbooks as mere accessories, the Commissioner looks upon good textbooks as fundamental in the maintenance and improvement of our elementary course of study.

In view of the fact that the contracts for readers expired July 1, 1914, and that there are at present no readers or literature textbooks for the upper grammar grades, the Commissioner recommends that the State Board of Education take such action as will insure the provision of the best reading and literature textbooks available for the elementary schools.

Other subjects, taught without textbooks, are music, morals and manners, humane education, drawing and elementary science. This condition also—not a satisfactory one—is called to your attention for action. The contract for writing books expired in 1912, that for history for the lower grades in 1910. The best textbooks and manuscripts in both these subjects should be investigated before state adoption.

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Dates for the expiration of the other contracts are the following: Geographies, 1916; hygiene, 1916; language books, 1916; civics, 1918; history for the upper grammar grades, 1918; arithmetics, 1918. While no immediate action is necessary, it is suggested that careful examination of textbooks and manuscripts in these subjects be begun.

THE COUNTY UNIT SYSTEM.

Though good textbooks are powerful factors in vitalizing an elementary course of study which hopes to be of service to all of the people, yet neither good textbooks nor good teachers can be brought to their highest degree of effectiveness under wrong or weak or loose or slender organization and administration. The cities have long ago realized this and, though not perfect, their method is far superior to that obtaining in rural communities. California is to be congratulated on the fact that she sets the same general standards of teaching qualifications for the rural as for the urban teacher, but cities, through their city boards of education and their city supervising experts, are able to exercise a selective power which secures for them specially well-trained, experienced teachers. In the cities, too, there is a tendency to standardize teachers, and when a premium is put upon good teaching, and better salaries are offered those who continue to educate themselves, the quality of the teaching is sure to improve. In the rural communities there is little criticism of poor teaching or recognition of excellent teaching, and no incentives are offered for improvement. Teachers are not always wisely chosen by the three district trustees, and having been chosen are left alone, uncriticized and unrewarded. The county superintendent, their only professional advisor, overburdened with other duties, which are continually increasing, is rarely able to pay more than one official visit per year, the one required by law. Such visitation can not be dignified by the name of supervision.

In addition to training for her work, however, the rural, like the city teacher, needs training *in* her work. It is passing strange that we should imagine we are getting the best service from a teacher when we put her as far away from public opinion and expert supervision as possible. Even a good teacher does not know enough to fulfill all her task when thus isolated. She needs special kinds of knowledge which must be brought to her, just as she must be provided with special kinds of textbooks and teaching equipment. She needs a knowledge of the people of the various communities. Every teacher ought to be shown how to make a survey of her district, of its industries, its religions, its amusements, its living conditions, its faults, its virtues, its ideals, its limitations, its possibilities. There is a certain personality about every community that must be known, and to attain this knowledge even trained teachers must have leadership and supervision. Who has not wondered at the pluck of the optimistic young Normal graduate who

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goes, as a rule, for the first few years of her teaching life to the rural school. Far removed from all social relationship that would tend to stimulate or inspire her, unrewarded, unencouraged, unnoticed, she spends day after day, week after week, month after month, trying to do what she thinks she is paid for doing. No wonder should she lose her standards, no wonder should she become disheartened. We have no other analogous condition. Our army, our railroads, our banks, our churches, all our great political and industrial organizations are planned according to some method of oversight of the rank and file by the superior officer. In the rural school only, does the worker go about her task unchecked by superior criticism, uncheered by superior approval.

The county superintendents are eager for more supervision, and it is interesting to note that, even without legislation, plans are evolving which tend conclusively to a general line of action. In illustration of this the Reedley experiment might be cited. In Fresno County, California, about twenty-five miles from the city of Fresno, is to be found the little town of Reedley, containing a good grammar school of several rooms and a union high school. This union high school has its own board of trustees, composed of members from the various rural school districts contributing to its support. No adequate law obtaining for the provision of a district supervisor, an additional high school teacher is employed, who, however, as a matter of fact, devotes almost his entire time to visiting the various district schools. The distances are long and the roads are not always good, so this district supervisor is provided with an automobile. He goes from school to school, doing what he can to better the condition of each, and using his own judgment as to what he deems the most urgent demand. Among these demands the following have been met:

Library and supplementary books have been distributed; the floors of all the one-room schools have been oiled; good water has been piped to several schools; sanitary drinking fountains have been installed; an open-air schoolroom has been built; several neighborhood differences have been settled; lecture courses by professors of the University of California have been delivered; trees and flowers have been planted and cared for. In some schools, sewing has been taught by a woman supervisor, and the high school musical director having been interested, now gives a portion of his time to the direction and supervision of music in these rural district schools. As a consequence, a number of union concerts have been held, at which people from several districts assembled. A group of boys from one of these schools, not too far from the high school, has gone into the Reedley high school once a week for work in manual training. Seventy-eight per cent of the children of the district schools, upon their graduation from the eighth grade, signified their intention of entering high school. So helpful has this experiment

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proved to the district schools, to the high school and to the communities, that it is to be continued next year, and teachers outside the fortunate "ring" are begging to be included in the supervised group.

This may appear a crude and unsatisfactory supervision, but it is much better than this brief sketch shows, and in sparsely settled districts, it is certainly far superior to almost absolute neglect. It shows there is no better way quickly to improve the condition of rural schools, especially of scattered one-room district schools, than to establish a system of expert supervision. The children remain in their own setting, while a sympathetic educated outsider, understanding their difficulties, appreciating their advantages, and thoroughly in earnest, having a distant as well as an immediate end in view, comes to them and says to them and to their teachers, "Let me show you how."

There is a great movement all over the country for better organization and administration of rural schools. What is called the County Unit System is the plan of administration most in favor. It is found in modified forms in several states. One after another they are reorganizing their rural systems on this basis. The Minnesota Education Commission, appointed under an act of legislature to study the school systems of the state, has just reported in favor of it. It is only a matter of time in the opinion of your Commissioner when it will be universally recognized as far and away the most effective system in operation. The plan in general is the subordination of the districts to the county. A lay board appoints the county superintendent and such assistants as may be needed. The members of this professional board are the educational administrators of the county. They have no jurisdiction over the city schools. Their duties correspond in general to those of a city board of education. The teachers are selected and supervised by this board. School supplies are purchased and school buildings erected under its direction. The sites of these buildings also are decided by this administrative board. The retention of local advisors or helpers to confer with the county board in order to furnish the local interest supplied by the old district trustees is advisable. Under such a system of administration rural teachers are provided with leadership and supervision analogous to that given to city teachers.

The present constitution of the State of California does not permit the establishment of the county unit sysem, but legislation for the employment of assistants to the county superintendents, in order that rural teachers may be directed and supervised in their work, is possible and is recommended by the Commissioner as one of the most important changes necessary for the improvement of the rural schools.

Article X, section 1674, provides for the formation of union school districts. Consolidation of school districts tends greatly not only to equalize but to increase the educational opportunities of the children

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living within them, and effort is being made by progressive educators and by intelligent, far-sighted citizens of various communities throughout the state to avail themselves of the privileges of the law wherever possible and to discourage the formation of new, small, struggling districts, each barely able to maintain an insignificant school. Some of the county boards of education have studied their counties and have made maps showing where union schools could best be placed—Santa Cruz County has made an excellent map of this kind—but because of local pride and jealousy and because of erroneous ideas concerning union schools, the attempt to form them has often been blocked. With administration such as the county unit system would provide, or even with district supervisors who work with the county superintendent and who have the interest of all the rural schools of the county at heart, there is no doubt that union schools would be formed more often and—what is quite as valuable—that new, weak, one-room schools would cease to be built except in localities where conditions absolutely forbid the transportation of the children to a central union school.

IMPROVEMENT OF THE ELEMENTARY SCHOOLS.

The rural schools educate some of the most capable and efficient citizens of the state, but undoubtedly if educational advantages were greater in the country, more children would complete the elementary school course and many of those who move into cities in order to obtain the superior advantages there offered by the city schools, would remain in the rural districts. No greater inducement for people to make their homes in agricultural districts can be offered than the fact that these districts afford excellent educational opportunities. On the other hand, intelligent farmers and orchardists are not seeking permanent homes in those sections of the state where the schools offer education to their children noticeably inferior to that provided for all children in urban communities.

For these reasons the Commissioner believes that the state ought to provide for the rural schools more money for their maintenance and improvement.

The favor with which the proposed abolition of the poll tax is being received by the people, strongly suggests that the state school fund will be deprived of about $850,000 per annum, or approximately one seventh of the total amount which the state provides for the support of common schools. To meet this deficit, if it occurs, the state will probably increase the amount transferred by the State Controller, on the basis of average daily attendance, to the school fund from the general fund of the state.

This amount is now computed at thirteen dollars for each pupil in average daily attendance in the elementary schools. The average daily attendance during the last seven years shows an increase of thirty-six per cent, while the state aid for the same period shows an increase of

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only thirty-five per cent. In contrast to this, the state aid given to high schools during the last seven years shows an increase of one hundred seventy-one per cent. In order to meet the possible deficit from the abolition of the poll tax and to give added necessary assistance to all of the children of all of the schools, both urban and rural, the basis of computation upon which the State Controller transfers funds from the general fund of the state to the school fund should be not less than seventeen dollars for each pupil in average daily attendance in the elementary schools.*

THE ELEMENTARY COURSE OF STUDY.

Investigation discloses the fact that instead of one there are many courses of study for the elementary schools. So great are the differences that a child in being transferred from one school to another not infrequently is placed a half grade or even a grade lower or higher than his original assignment. This condition not only is often specially unfortunate for the children so transferred, but involves a greater expenditure of public funds for their education than is necessary.

While no change should be made which would curtail local educational opportunities, yet a standard of minimum requirements would tend to systematize the course for all schools without impairing the efficiency of any one of them.

PROBLEM OF THE HIGHER GRADES OF THE ELEMENTARY SCHOOLS.

Perhaps at no time in the history of our country has the elementary school received greater attention from both educators and the people at large than is being given it today.

The high school as a part of the public school system is no longer an experiment. To be sure, necessary requirements for the training of its teachers need modification, and it has, and will always have, problems to be solved, but its place in the educational scheme is no longer questioned.

Because the high school is established, and because every year larger numbers of boys and girls are taking advantage of the opportunities it offers, we are brought face to face with several problems in the elementary schools that formerly did not present themselves so insistently.

There is undoubtedly a gap between the upper elementary grades and the high school. If the high school is a recognized part of our school system, if the people are taxed to support it, then it follows that it is to be used as much as possible by the people and not by a special or selected class. The high school has been blamed, and there can be no doubt that the criticisms are not unwarranted, for not extending a welcoming hand to all sorts and conditions of boys and girls who approach it with well defined, or even illy defined inclinations for

*Since the submission of above report the poll tax, by vote of the people, has been abolished.

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more education and, in order to remedy this defect, much time and attention have been given to these wrong conditions in the existing high school.

While this readjustment is still in progress, the searchlight of investigation has been circling around the educational field and is now focussed upon the seventh and eighth grades of the elementary school with only strong side lights flashing upon the first year of high school. It is the elementary school, it is claimed, that needs reforming. Statements are made that courses offered in the last two grades—the seventh and eighth—of the elementary school are neither interesting nor instructive, that they are theoretical rather than practical, logical rather than psychological. The people are clamoring for an education that will better fit the children for life. The high schools, it is said, holding to certain entrance requirements imposed upon them by the universities, have been insisting that they fit them for high school.

Reform is now in process both in the high school and in the elementary school. The questions everywhere under discussion are:

What is a practical education? What does it mean to fit a human being for life? Are cultural courses practical? How much time should be given to work requiring self-expression that prepares the individual to be a producer; how much that increases his ability for appreciation and thus prepares him to be a consumer? These and similar questions for the last ten years have formed a hotbed of inquiry concerning the high school. They are now being discussed with even greater enthusiasm concerning the grammar grades.

Never before has the feeling been so strong, both among citizens at large and among teachers, that it is the business of the school, especially the elementary school, so to modify its work as to hold the children in school for as long a time as possible. Never before has the feeling been so strong that if the elementary school offered suitable work to all sorts and conditions of children, the children would be eager to take the work. It is hoped by means of vocational guidance, a certain form of which can be given directly to the youngest children—it has always been given indirectly to all children—by means of vocational training, and by means of beneficial changes in the curriculum and administration of the upper elementary grades to give opportunity not only to the brilliant and average children, but also to the retarded, to the foreign-born, to those who are below par mentally, and to those who can excel in certain lines of work but are unable to accomplish anything in others.

Your Commissioner wishes to call attention to the fact that the major part of all initiative in this reorganization and readjustment of the elementary school course is being taken by the high school faculties and the departments of education in universities. "Intermediate" schools, as they are commonly termed, are being formed. These schools are

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usually either separate schools set apart from the other elementary grammar schools and taught by special faculties, special teachers being employed to teach special subjects, or they are carried by high school faculties as preliminary or preparatory courses (neither of these conditions is ideal, as the children are young and not always are they ready for the independence of action usually permitted), or—and this change is less radical—the seventh and eighth grade work, reorganized, is carried on as before in the grammar school buildings by the regular grammar school teachers.

The elementary school itself seems strangely apathetic in its attitude. If the intermediate school is to be definitely formed, it is a serious undertaking. If it is to be separated from the elementary school, it is a more serious undertaking. At present the thought in the minds of the people is eight years of elementary education. To be sure, there is a great dropping off in attendance, even in the fifth year, and one of the great benefits to be attained by the establishment of the intermediate school, it is claimed, will be the holding in school through the sixth year, children who otherwise would certainly drop out. But what must be faced is the danger of making two gaps—one between the elementary and the intermediate, the other between the intermediate and the high school. This gives rise to the much discussed question as to whether or not the intermediate is to be still a part of the elementary school, involving questions concerning the requirements necessary for its teachers and legislation for its support.

This whole subject is being considered not only in our own state, but throughout the country. United States Commissioneer P. P. Claxton is in favor of dividing our educational system into periods of six years—six years of elementary school education, *e. g.*, and six years of secondary school education.

Whatever readjustment may be made, whatever legislation may be considered necessary, the continuity of our state educational system should thereby not be weakened, but strengthened. No legislation should be enacted which will tend to carry with it the idea that the child at the end of his sixth year of school life reaches an educational climax. It is to be regretted that the close of the present eighth year forms a line of demarkation between the elementary and the high school. Certainly this line must not be set back two years. On the contrary, all charges in the curriculum of the upper grammar grades of the elementary school and all legislation with reference thereto should have in view an unbroken system of public education.

CERTIFICATION OF TEACHERS.

More than eighty per cent of the teachers of California are professionally trained. In some counties no applicants for teachers' certificates present themselves as candidates for examination; in others only

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one or two. From June, 1913, to June, 1914, inclusive, the three semi-annual examinations held in each county of the state for the purpose of certificating elementary teachers, resulted in the granting of only six hundred seventy-eight certificates, an average of less than four for each examination. In three counties no certificates were granted; in seven counties only one.

It seems as if the time were fast approaching when California could require professional training of all of her teachers, and as if the time had arrived when no teacher should be allowed to be examined who can not produce evidence of education equal to that of a graduate of a reputable high school. A proposed law exacting high school education or its equivalent as a minimum requirement in scholarship, and a definite amount of professional training as a minimum requirement, in practical efficiency, for all candidates for certification as elementary teachers, is included in the proposed recommendation for legislation now in the hands of your committee on legislation.

The present law, which, as it stands, permits graduates of universities to teach in the elementary schools without having received any special professional training, is illogical and impractical and ought to be repealed.

The law relating to the kindergarten-primary certificate should be so amended as to permit, under prescribed conditions, the holder of any valid special certificate for kindergarten work, or of any kindergarten-primary certificate to teach in any grade below the fourth of the elementary schools. All these proposed changes have been submitted to the committee on legislation.

ACCREDITATION OF NORMAL SCHOOLS AND KINDERGARTEN TRAINING SCHOOLS.

Immediately on assuming the duties of office, the Commissioner of Elementary Schools was instructed by the Committee on Accreditation of the State Board of Education to investigate the standing of all normal schools in the United States or elsewhere applying to be accredited, and also of all those already accredited which were not known to be thoroughly efficient. Kindergarten training schools in like manner were to be examined and, as far as possible, standardized. The results of these investigations are embodied in the biennial report of the State Board of Education.

SCHOOL VISITATION.

One of the few definite duties specified by law assigned to the Commissioner of Elementary Schools is that of visiting schools. In no way can the actual work of a school be so well understood as by direct concrete visitation. Since all the schools can not be visited, it is planned to visit typical ones. During the seven months forty-one schools have been visited and about fifty conferences have been held with groups of

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teachers, educational experts and school patrons. Twenty addresses have been made in teachers' institutes, including a State Teachers' Association at Fresno and the National Educational Association at St. Paul; five addresses in trustees' institutes; nine addresses in parent-teachers' associations, clubs and citizens' meetings, and six commencement addresses. A number have also been given to teachers and groups of pupils in schools. These addresses have frequently been followed by discussions. Some of them have dealt with subjects relating to the actual work of the schoolroom, but largely discussions have centered about school conditions; buildings, union or consolidated schools, grounds, school equipment, school sanitation, school architecture, water supply, etc.

Because these conditions, as a rule, are not so good in the rural as in the urban schools, most of the visits have been made in rural districts, detailed reports of which have been submitted to the State Board of Education.

The rural schools of the state vary greatly in efficiency, due largely to the division of the county into numerous school districts, each independent of the other, and to the fact that they have no adequate common supervision. The latter condition could be remedied by legislation.

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LETTER OF TRANSMITTAL.

SACRAMENTO, CALIFORNIA,
September 14, 1914.

The Honorable State Board of Education,
Sacramento, California.

LADIES AND GENTLEMEN:

As required by section 1519 of the Political Code of California and by resolution of your honorable board, I submit herewith the first annual report of the Commissioner of Secondary Schools. Owing to the fact that the office had no incumbent previous to January 1, 1914, this report covers only that part of the fiscal year beginning January 1, 1914, and ending June 30, 1914.

Very respectfully yours,

WILL C. WOOD,
Commissioner of Secondary Schools.

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FIRST ANNUAL REPORT.

THE OFFICE, ITS ORIGIN AND FUNCTION.

The office of Commissioner of Secondary Schools was created by act of the legislature approved June 6, 1913. In defining the powers and duties of the new State Board of Education, the legislature authorized and directed the board to study the educational conditions and needs of the state; to make plans for the improvement of the administration and efficiency of the public schools and to conduct educational investigations. It was to assist the state board in exercising these powers that the legislature authorized the appointment of three assistant superintendents of public instruction, who are known and designated as the Commissioner of Elementary Schools, the Commissioner of Secondary Schools and the Commissioner of Industrial and Vocational Education.

In defining the duties of the Commissioner of Secondary Schools, the legislature provided that he "shall visit and investigate the secondary day and evening schools of the several counties of the state. He may recommend changes in the course of study, and shall investigate all contracts with textbook companies and see that they comply with the law, and shall perform such other duties as may be assigned to him by the Superintendent of Public Instruction under the direction of the State Board of Education."

The office was created in order that the state department might undertake a closer supervision of the secondary schools, which have increased in number until they have reached a total of two hundred and fifty-seven. When the constitution of 1879 was adopted, provision was made for the supervision of the schools of the state by the Superintendent of Public Instruction and the various county superintendents of schools. At that time the high school was not fully recognized as an integral part of the state school system. There were a few public institutions of secondary grade, but these were supported entirely by district taxation. Owing to the fact that they were locally supported, the inspection of high schools by county superintendents was only casual and perfunctory. Since that time the growth of the elementary schools has been so great that the county superintendent has been kept busy supervising the work of the grades, and, except in a few instances, he has not been able to undertake more than a very general oversight of the high schools within his jurisdiction.

After a time it became necessary to standardize the high schools, and the university, through its examiners, undertook the task which the state and county educational agencies could not or did not perform. In fact, up to very recent times, the university examiner has been the only supervisor that most of the high schools have known. In performing

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this service, the university has unquestionably established quite definite standards in high school work, especially in matters of curricula and methods of presenting the subjects required for entrance to the university. It has succeeded in working out a better articulation of college and high school—a closer cooperation of these institutions in arranging courses of study for the students who are planning to enter college. The high school has been modified by university supervision, and the modifications have resulted in establishing higher standards. The university requirements have been modified also because of a better understanding of high school conditions gained by the university examiners as they journeyed about the state. However, the supervision of high schools by university examiners has its limitations growing out of the very reasons for university inspection, which are to determine whether graduates of the various secondary schools are qualified to enter the state university, and to suggest changes in the course of study and methods of teaching necessary to make the work meet university requirements.

While preparation of students for the university is one of the great functions of the high school, we are coming to realize that it is not the only function. This is well illustrated in statistics compiled from the Commissioner's recent high school survey questionnaire. Replies from 209 high schools in California show that in the first year classes these schools enrolled on the last school day in February, 17,898 students. Last year these same high schools granted diplomas of graduation to 5,852 young people. Of this number only 1,741 entered colleges; 918 entered normal schools; 587 undertook advanced work other than that provided by college and normal school, and 2,606 did not undertake any kind of advanced work. In other words, the high schools are graduating only about 33 per cent of the first year enrollment and are sending only 10 per cent of the students enrolled in the first year, to college. Using the total number of graduates as a basis for computing percentages we find that only 29 per cent of the graduating classes enter college; 16 per cent enter normal schools; 10 per cent undertake other kinds of advanced work, and 45 per cent make the high school their finishing school for life.

These statistics indicate in a general way the need for supervision of secondary schools by the state department. Ninety out of every one hundred students who enter the high schools are not going to the university. These young people are entitled to supervision which shall aim to assist in arranging courses suited to their needs. While it is true that many of these students would be benefited in greater or less degree by taking purely academic courses, the fact remains that for most students these courses as taught at present will not afford a well rounded, efficient preparation for life, unless followed by a college

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course. The great function of the American high school—the function which, when generally recognized, will make the high school an institution for all the children of all the people, is to afford each adolescent human being who enrolls therein an opportunity to discover himself. If the high school course is limited to traditional academic subjects taught with the sole aim of preparing students for college, we are justified in concluding that most of the students will not have adequate opportunity to attain self-discovery through work done in high school. There is need, therefore, for a redirection of all the branches of the high school course, to the end that all the students may find in them efficient preparation for life.

If we accept the principle that the high school should stand for equality of opportunity, we commit ourselves to a more comprehensive curriculum, and to a broader treatment of the traditional academic branches. The ninety who do not go to college are entitled to something more than an incomplete and restricted course leading to a place from which they are barred by circumstances. A few years ago we might have eased our consciences by asserting that preparation for college is the best preparation for life. Recently, however, the assaults of the psychologist on the doctrine of formal discipline, reinforced by the criticism of employers of students trained in the high school, are forcing us to recognize that specific preparation of the ninety for life is quite as important as specific preparation of the ten for college. The modern school is therefore broadening its scope. It must continue to prepare the ten for college, but it must also offer to the ninety some work and genuine culture which will serve as a foundation for the best lives they are capable of living. It is the duty of the Commissioner of Secondary Schools to look after the interests of the ninety, as well as those of the ten—to stand for a secondary school which will perform all its functions and offer to each student the kind of education best suited to his mental and physical capabilities. The Commissioner should represent the interest of the state in the education of all of its wards for citizenship. He must view the high school at a different angle from that of the university examiner. However, his entering upon the field need not restrict the sphere of influence of the university in its inspection of high school work. The university is justified in inspecting the work of the secondary schools for the purpose of determining whether graduates of these schools are qualified to enter the university. The Commissioner and examiner will not work at cross-purposes, because their purposes do not cross. They are co-workers, striving to advance the standards, to broaden the scope and increase the efficiency of secondary education in the state.

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It should be pointed out in this report that inspection of high schools by the state department is not peculiar to California. Thirty-two of the United States have some form of state inspection of high schools. In thirteen of these states, the only inspection of high schools is by university examiners. In fifteen states, inspection is conducted by representatives of the state office. In four states, including California, there are two inspectors, one representing the state office, the other the university. In New York there are fifteen state inspectors of high schools; in Missouri, two inspectors; in New Hampshire, two inspectors; in Ohio, two inspectors; in Pennsylvania, four inspectors, and in Wisconsin, two inspectors.

VISITATION OF SCHOOLS.

Although one of the chief duties of the Commissioner is to visit the secondary schools in the several counties of the state, he has found it quite impossible to visit more than 10 per cent of the high schools during the first six months of his incumbency. However, he has, during this period, met more than one fourth of the high school teachers of California by attending teachers' institutes and other educational gatherings. Owing to the necessity of organizing the work of his office, he was unable to begin visiting before the middle of March. Within the last three and a half months he has visited twenty-one counties including Alameda, Butte, Colusa, Contra Costa, Fresno, Kern, Los Angeles, Marin, Mariposa, Mendocino, Merced, Nevada, Placer, Sacramento, San Francisco, Santa Clara, Santa Cruz, Solano, Sonoma, Tulare and Yolo. To make these visits he has traveled about 6,000 miles. In his journeys he has made 50 addresses to teachers, trustees and various public gatherings; has held 13 conferences and has visited 28 high and intermediate schools. The total expense to the state of these visits was $401.98.

Of the addresses, 18 were delivered in teachers' institutes; 5 were delivered in trustees' institutes; 9 were delivered in various teachers' clubs and other organizations; 9 were commencement addresses, and 9 were delivered in citizens' mass meetings for the discussion of local educational problems. Of the conferences four dealt with the statewide organization of high school principals for the control of school athletics; three were with groups of high school teachers; one was with a board of education regarding the selection of a site for the new high school building; one was with a committee of the Northern California Teachers' Association regarding a better organization of debating contests; three were with university authorities regarding the establishment of training schools for secondary school teachers, and one was with a city board of freeholders regarding the educational features of a proposed charter.

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A BUREAU OF INFORMATION.

The law prescribes that the Commissioner shall investigate the secondary schools of the state. The object of this investigation is not stated, but it is presumed that it is twofold. It is to obtain information which the State Board may use in determining policies, and to disseminate this information for the benefit of the schools. The office of the Commissioner is rapidly assuming the function of an information bureau in matters pertaining to the high schools of the state. High school principals, university departments of education, teachers, public officers and newspapers have forwarded requests for information which the office should have on file. Frequent requests are made for data concerning tax rates for high school purposes, cost of school buildings, cost per pupil for maintenance, bond issues and teachers' salaries paid in various places. Information is wanted concerning new departures in education such as the intermediate school, vocational guidance, continuation courses, civic centers, student self-government and the junior college. Many requests are received for information concerning the arrangement of courses of study. School principals desire answers to such questions as the following: "What is the general practice in arranging science courses?" "What proportion of California schools offer two year commercial courses?" "When is algebraic theory taught in most high schools?" "How many years of German are offered in small high schools, and in which years?"

In order to secure information of the kind indicated above, the Commissioner has sent out a high school survey questionnaire, and replies have been received from 249 high schools.

Courses of study have also been collected and filed. Much of the data has been compiled from these sources and is ready for distribution.

The office of the Commissioner may undoubtedly render great service as a clearing house for information relating to the high schools of the state. Much of the data should be compiled and published in the form of state bulletins, thus anticipating inquiries. The Commissioner is preparing a bulletin on the intermediate school which will be published within the next half year. He has also requested the State English Teachers' Association to undertake the preparation of a bulletin on "Oral English in the Secondary Schools," and the work is now under way. Much good work done by committees of teachers' associations in connection with the high school course is worthy of distribution, but it reaches only a few of the teachers because there is no agency that will undertake publication. The State Board will render a service to the schools if it will undertake the publication and distribution of matter of this kind.

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CERTIFICATION OF HIGH SCHOOL TEACHERS.

California has always maintained a high standard for high school certification. The former State Board of Education, acting by authority of statute, prescribed by general regulations the conditions under which county boards of education granted certificates of high school grade, and the present State Board of Education has affirmed its adherence to the high standard of its predecessor. The only credentials recognized are university credentials granted by accredited universities, and special credentials issued by the State Board itself. The university credential has been issued by an approved university to any candidate who holds a bachelor's degree and who has completed a year of graduate study, including twelve units (semester hours) of work in pedagogy. Certain exemptions from the requirements in pedagogy are made when the candidate is a teacher of experience, or a graduate of an approved normal school. The State Board high school credential is issued to teachers with twenty months' experience who, while not fulfilling the technical requirements for the university credential, have academic and professional preparation equivalent to that required for the university credential.

The Commissioner of Secondary Schools acting under direction of the committee on credentials has undertaken a revision of the regulations governing high school certification and the State Board of Education has approved the revision. The new regulations which will be effective for all candidates who receive their credentials after February 1, 1915, are more fully discussed in the report of the State Board of Education. The purposes of the revision are to advance the pedagogical requirements from twelve to fifteen units; to prescribe certain courses in pedagogy, to define more clearly the conditions under which the universities may grant the credential, and to standardize the form of the credential. As a result of the revision, the standard of regular high school certification will be substantially advanced.

In March, the State Board of Education directed the Commissioner to confer with the President of the University of California and the President of Stanford University and urge the organization at each university of a training school of secondary grade in which prospective high school teachers may be given opportunity for practice teaching under direct supervision of the university faculty. The University of Southern California has already provided opportunities for practice teaching in a secondary school under its supervision. The Commissioner conferred with President Wheeler of the University of California, and was assured that the organization of such a school would be undertaken if an arrangement mutually satisfactory to the university and to a neighboring school department could be worked

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out. Since that time, the university has arranged with the school department of Oakland for the organization of the University High School in which students at the university may do practice teaching. At Stanford University, President Branner and the faculty show an earnest desire to cooperate with the State Board of Education, but so far, no plan for a training school has been formulated.

The law governing the granting of special certificates is in very unsatisfactory form. It provides that special certificates may be granted by county boards of education "to those who, by examination or any credentials, or by both, shall satisfy the board of their special fitness to teach one or more of the particular studies for which special certificates may be granted, and who shall satisfy the board of their proficiency in English grammar, orthography, defining, and methods of teaching. No special certificate shall be granted to teach, in any school, studies other than drawing, music, physical culture, and commercial, technical or industrial work." Special certificates authorize "the holders to teach in the schools of the county such special branch or branches of learning, and in such grades as are named in such certificates." In accordance with these provisions, county boards are issuing special certificates of elementary and secondary school grade.

The chief defect of the law is the failure to establish a uniform standard for special certification; there are as many standards as there are county boards of education. There are a number of counties in California that have established a minimum academic qualification no higher than that fixed in the law—namely, proficiency in grammar, spelling, defining and methods of teaching. As a result, we have a considerable number of special teachers in California who have never taken a high school course or its equivalent. Strange to say, some of these are teaching special branches in the high schools.

A tolerance of low standards for the special certificate is almost certain to have a bad effect on professional standards generally. One county can not maintain a low standard of certification without hurting its neighbors. Owing to the practice of reciprocity in certification, a special certificate granted in one county is recognized in many other counties of the state. In the circumstances, there is danger that the lowest standard for special certification will become the uniform standard.

It is quite essential, therefore, that the regulations governing special certification be revised. There should be a uniform standard for the state, and such a standard can be established only by state authority. The State Board of Education, if authorized to do so by law, could prescribe the rules under which special certificates may be granted by county and city and county boards of education in the same manner as it now prescribes the rules under which high school certificates may be

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granted. A great increase in the number of special certificates granted in recent years emphasizes this need for state regulation. In 1909, there were 201 high school teachers holding special certificates. In 1913, there were 669, an increase of 233 per cent. In fact, more than 25 per cent of the high school teachers of the state are teaching on special certificates.

It should be observed in connection with this discussion of certification requirements, that commerce is rapidly assuming the rank of a profession. In spite of this fact, most of the commercial departments in our high schools are not training the students for the higher positions in the world of commerce. They are devoting themselves for the most part to the training of clerks and stenographers. While there is need for high school courses in commercial geography, economics, economic and industrial history, commercial law, salesmanship, advertising and other studies of a more or less scientific nature, there is a dearth of teachers who can teach these subjects. The teacher of commerce in the high school should have had training quite as broad as that required of teachers of the academic branches. The teacher who knows only rule-of-thumb business methods, will prepare students for only rule-of-thumb positions in the world of commerce. The teacher with breadth of training is required to prepare young people for the higher commercial positions, for which there is a greater need and in which there are greater opportunities. In the circumstances we should urge upon the university the need for undertaking the preparation of broadly trained teachers of commerce in our high schools. Ultimately commerce should be recognized as a branch in which regular high school certification shall be required.

STUDENT ACTIVITIES.

The high school is one of the means which American democracy has devised for conserving and advancing its manifold interests, and the interests of its citizens. Because of the fact that it undertakes to deal with Americans of adolescent years, it has a peculiar and intricate function. The period of adolescence is a period during which dominant life interests are being selected. It is peculiarly a period during which ambitions are shaped, and actions organized into habits. In consequence, the work of the high school teacher is not limited to the classroom; it reaches out into extra classrom activities—into a great variety of social manifestations which are known as student activities. These activities are not to be regarded as superfluities or excrescences of school life. They are a youthful expression of desire for social organization. It is true that many of these activities do not measure up to adult standards; however, if we condemn them, we condemn youth itself.

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In school activities, we find a means for developing qualities of manhood and womanhood which twentieth century democracy demands. Character is the foundation of good citizenship, therefore, the development of character is one of the chief ends of public education. However, education that is limited to the acquirement of knowledge in the classroom, does not insure the development of character. In the light of psychological and sociological investigations, we are coming to recognize that character is the resultant of wholesome knowledge and wholesome activity. Our aim, therefore, should not be to suppress student activities, but to use them for social ends. High school education is not complete unless students are given opportunity to cooperate and to test seriously their powers. We should give the students a chance to show initiative, to develop independence, to evaluate human actions. We should make occasions for the development of a sense of responsibility. By allowing a degree of freedom, and opportunity for self-direction in student activities, we may encourage young Americans to develop those qualities of self-control and self-direction, so essential in American citizenship. This does not mean that the prerogatives of the faculty should be surrendered to the student body. The purpose of student activities is defeated if they are allowed to run riot; if they are not subject to able guidance and supervision by the faculty.

It is a difficult problem to utilize student activities for purposes of education. As yet, the utilization of these activities for such purposes is in the stage of experiment. Earnest efforts toward their utilization are being made in various high schools in California, and the experiences of those who have attained some success in dealing with student activities should be made available for all high school teachers of the state. Some high schools have developed an excellent system of limiting student dues and controlling student finances; others have succeeded in putting athletics on a satisfactory basis. Debating, student body government and school journalism are activities which should be investigated and organized on a more satisfactory basis. The Commissioner is working on these problems, and both principals and teachers are cooperating with him in their solution. Already a plan of organizing athletics on a state-wide basis has been worked out and will soon be in operation.

For a long time high school authorities have recognized the need for general and genuine faculty control of interschool activities. Each high school principal is quite able to control student activities within his own school, but he feels the need of general control where his students are competing with the students of other schools. In consequence of a lack of general organization, many abuses have grown up in interschool contests. In many instances, these contests are positively harmful to the moral as well as to the physical well being of the con-

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testants. It is idle, however, to decry athletics, and to attempt to bar these activities from the high school by positive and prohibitive regulations. We are facing a condition, not a theory. High school athletic activities are with us, and they are generally regarded as natural means of expression for adolescent human beings. However, they must be controlled if they are to serve their real purpose as agencies for moral and physical training. School athletic activities that are allowed to run wild not only dominate the spirit of the school, but they also militate against the development of wholesome habits of life. There is need for a greater moral emphasis in athletics and this can be secured best through statewide control.

During the last six months much good constructive work has been done, having for its purpose the control of interschool athletics throughout the state by faculty representatives, the abolition of the paid coach system, the employment of teachers of physical education in the high schools, the limitation of overnight trips by athletic teams, and the development of a widespread interest in games and sports throughout schools upon a wholesome, recreational basis. A committee of the California High School Teachers' Association and a Committee of the Athletic Council of Southern California, together with representatives from the Sacramento and San Joaquin Valley regions, and the Commissioner of Secondary Schools met in Los Angeles in April and drafted a constitution for the California Interscholastic Federation. According to this constitution the state is divided into four sections corresponding roughly to the four sections of the California Teachers' Association. Two representatives from each section, elected by the high school principals thereof, form the Federated Council which will be the controlling body for the state, and the final court of appeal in all matters pertaining to final and semi-final contests between schools. The Federated Council will also try to maintain a proper relation between high school activities and other school work.

The constitution of the California Interscholastic Federation was printed by the State Board of Education as Secondary School Bulletin No. 2. The constitution has been accepted by a majority of the high school principals of each section, so it is now in operation. Representatives from all of the sections met at Berkeley in July, perfected an organization and established certain standards. The organization of this federation is one of the most hopeful signs of better times in high school athletics in California.

NEW TEACHERS' ORGANIZATIONS.

During the year, two important organizations of high school teachers were formed. The California High School Teachers' Association held its first meeting at Berkeley in July, 1913, and its second meeting in the

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same city in July, 1914. There were several hundred high school teachers in attendance, to hear the fine program of addresses and papers. In April, 1914, a state English teachers' club was formed at a meeting in Oakland. Its purpose is to secure a better organization of English work in the elementary and secondary schools. Several committees have been appointed to investigate problems in the course of study in English, and their reports should be of much assistance in the reshaping of English courses in California schools.

It is the desire of the Commissioner to work with these new organizations and with the older ones as well, in solving the problems of the secondary schools of California. The voluntary organization of high school teachers into clubs having for their purpose the study of high school problems, is worthy of encouragement, since real advance in secondary education depends very largely on the cooperation of all the factors in high school work.

DISTRICT CONVENTIONS OF HIGH SCHOOL PRINCIPALS.

The Commissioner of Secondary Schools has observed a great need for district conventions of high school principals. While he is able, by means of bulletins, to inform the various high school principals concerning administrative matters, he feels the need for meetings in which these matters may be thoroughly discussed. It was very difficult, for example, to organize the California Interscholastic Federation because of misunderstandings which could have been cleared away in a half hour in any convention of principals. The administration of the high school textbook law has also been very difficult because of lack of opportunity to exchange ideas.

The State Board of Education should be authorized by law to call annual high school principals' conventions, or institutes, in at least four sections of the state for the discussion of high school problems. Each high school district should be required to bear the actual and necessary traveling expenses of the principal while attending these conventions. In the judgment of the Commissioner, these conventions are necessary in the development and unification of secondary education in California.

THE HIGH SCHOOL COURSE OF STUDY.

High school principals and teachers are constantly facing two great problems—what studies shall be offered and how shall they be treated so as to minister efficiently to the needs, aptitudes and ambitions of the students. These problems are as old as education itself. Plato, in his great work "The Republic" set forth an educational theory based upon his conception of the nature of man and the nature of the state and suggested a course of study founded upon that conception. His aim was to develop philosopher-statesmen who would rule the state in accordance

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with the principles of absolute truth and justice. To develop a race of philosopher-statesmen, he would select for education only those young men who have the necessary perfection of mind and body, and especially the right mingling of gentleness with spirit. He would have these chosen ones study music, literature, gymnastics, generalized arithmetic, geometry, astronomy, musical harmony, pure philosophy and dialectic.

Since Plato's time, courses of study have been made and remade to reflect the spirit of the times and the wisdom or caprice of educational theorists. At all times educational theory has been a powerful influence in the making of curricula, and it is to be hoped that its influence will never wane. *That educational theory is best, however, which interprets and reflects the spirit of the times and aims to render dynamic the genius of a people.* Plato's course of study may fulfill an ideal purpose in an ideal state, but a modern course of study must fulfill a *real* purpose in a *real* state.

In California, we are educating in our high schools more than 65,000 young people for life in a highly complex civilization. They are not "chosen beings" nor are they all to become "philosopher-statesmen." They are the children of all the people, and they are to become active citizens in a great republic. The course of study they follow must be adjusted to them—to their needs, to their aptitudes, to their ambitions. These needs, aptitudes and ambitions are of great variety and of varying degree. It is accordant with modern civilization that they should be so. For these twentieth century students the course of study outlined by Plato or by the scholastics of the Middle Ages will not do. While we should not underrate the culture of the ancients, we can not overlook the strides that civilization has made in recent centuries. We must recognize that during the eighteenth and nineteenth centuries, the world progressed wonderfully in the arts and sciences, and in the application of these to life. An industrial and economic revolution has been in progress for two centuries and as a result we have a civilization the complexity of which is a challenge to the noblest and wisest of human kind.

This civilization demands thinkers and workers who understand and appreciate its problems. It has its peculiar ideals and purposes, and these must be interpreted and applied. The education of our high schools must therefore be of the twentieth century, by the twentieth century and for the twentieth century. However, we must not lose sight of the fact that the twentieth century is a product of the preceding centuries; we must view our century in the light of its evolution. The culture of the ancients, and the contributions of other times and peoples must have their rightful place in the education of the young people of America. However, greater emphasis must be placed on modern developments in art, science and literature, even though it requires a progres-

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sive curtailment of courses that deal with ancient culture. It is not that the world values ancient culture less, but that it values certain phases of modern culture more. It is because these phases of modern culture have greater social significance that they are becoming more prominent in high school courses of study.

For the method of approach in our modern courses of study we can, with profit, antedate Plato and adopt some of the methods of Socrates. As he saw possibilities of development in every one whom he chanced to meet, so we must afford educational opportunities to any who may seek them. As his teaching started with the natural inquiries of his fellow beings, whatever their station in life, so must our teaching be grounded in the life interests and needs of our students. As he built upon their inquiries a higher conception of their work and their place in the order of things, so must we build upon the interests and motives of our students and enlarge the horizon of their lives. As he awakened dormant interests, so must we render dynamic the static human energies of our students. *In other words, the modern course of study must start with the student as a center, and the interests and motives in school work must be organized about that center.*

The high schools of California, generally speaking, are developing courses of study that take into account the varying needs of the students. They are coming into accord with the modern spirit. The University of California is cooperating with the high schools and encouraging what Dean Lange so aptly terms "self-directed high school development." During the last ten years, the university has widened the scope of its entrance requirements until it recognizes practically all of the studies that may rightfully have a place in the high school curriculum, and the high schools, generally speaking, are rising to the responsibility that follows their freedom.

Among the developments of recent years, we note an earnest effort to motivate the English work and relate it to life. Thorough courses in English literature are given, but many teachers are taking advantage of the wider latitude allowed by the university in the choice of selections to be studied. The best literature of recent times is given greater recognition. In the junior and senior years, many high schools are offering elective courses in public speaking, dramatics, short story writing, and journalism. Some high schools are offering courses in the modern novel, significant modern books and American literature. Current magazine literature is recognized and the library habit encouraged. The composition text is no longer followed slavishly; in many schools it is used only as a guide. Serious efforts to correlate composition with other subjects are being made with varying degrees of success.

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In history, some of the high schools are offering courses which place emphasis on the history of modern Europe, only one year being given to European history up to about the year 1500. Some of the larger high schools are offering elective courses in economics and present day social and economic problems. The industrial and social phases of history are receiving greater emphasis. In one city, a course in Pacific coast history and problems is being offered. So far, however, these changes in the history courses have been regarded in the nature of experiments. Until their success is more definitely determined, most schools are proceeding along the lines laid down by the Committee of Seven or by the Committee of Five. There is need for cooperative constructive effort by California teachers of history looking toward the elimination of unnecessary details in the whole range of European, English and American history and the preparation of a set of topics in each period of history, upon which emphasis should be placed in teaching. This is perhaps the biggest present problem in history teaching, and it is to be hoped that college and high school teachers will cooperate in the preparation of such a syllabus.

In science, efforts are being made to relate the subjects to life, without sacrificing their scientific value. Teachers of mathematics are giving more thought to the humanizing and vitalizing of instruction. In the intermediate school, especially, interesting experiments in the teaching of concrete geometry and algebra are being tried with promise of success.

In the teaching of ancient and modern languages, redirection of effort is apparent. Teachers are getting away from the idea that parsing and syntax are of highest importance in the teaching of Latin and Greek. The observation made by Milton in his "Tractate on Education," in spite of the fact that it was written almost three hundred years ago, expresses the modern viewpoint in teaching the classics: "*Language is but the instrument conveying to us things useful to be known.* And though a linguist should pride himself to have all the tongues that Babel cleft the world into, yet if he have not studied *the solid things in them, as well as the words and lexicons,* he were nothing so much to be esteemed a learned man, as any yeoman or tradesman competently wise in his mother dialect only."

Young people should study syntax, parsing, "words and lexicons": but only as a means to higher ends. In order to appreciate Latin and Greek, the student must know "the solid things" in these languages, must develop appreciation of Greek and Roman life and literature, must understand and justly estimate the value of ancient culture.

In the intermediate schools, the study of Latin and modern languages has been introduced with success. The children like the new studies and really acquire a feeling for the language. In some high and intermediate schools the direct method in teaching the classics is used as

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much as possible, making the lessons interesting and lively. The teaching of foreign languages, ancient and modern, is thus yielding to the new spirit in education.

Among the newer subjects in the curriculum there is need for greater standardization. In music, manual arts, commercial branches, and some of the recently developed courses in English and history, this need is most apparent. While these branches do not permit of standardization to the degree that some of the older subjects do, a great deal can be accomplished by interchange of ideas and experiences and the publication of model courses worked out by high school teachers in cooperation with the universities and the commissioner.

PROBLEMS OF THE INTERMEDIATE SCHOOL.

During the last six years the school people of California have been working slowly and earnestly toward a better articulation of the elementary and secondary schools. School people have recognized the fact that the American organization of school work into two groups of grades—the elementary group including the first eight years, and the secondary group including the succeeding four years, is neither logical nor scientific. This traditional arrangement is perhaps due to the fact that the American people, cherishing the common school as the hope of the nation, have learned to regard common school education and elementary education as one and the same. Looking upon the common school as the conservator of democracy, our forefathers seem to have assumed that the greater the number of years devoted to elementary education, the more democratic education would be. The school course was lengthened in some communities until it included twelve years. With the coming of the high school, however, the course has been curtailed until it now includes eight years of work.

In the light of educational research we have discovered that six years are quite sufficient to place the child in possession of the working tools of knowledge such as reading, writing and the elements of arithmetic, and that the remaining two years of the elementary course are the least efficient years. Some educators have advocated a rearrangement of the twelve years on the basis of six years of elementary work and six years of secondary work. Others have advocated the organization of a six year elementary course, followed by a three year intermediate course which in turn shall be followed by a three year upper high school course. Others have taken the position that the grouping of grades has no greater significance than the supervising official may attach to it; that the essential thing is that the school course below the college shall be regarded as a unit of twelve segments or years of work properly linked together, or articulated; that the transition from the eighth to the ninth

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year, or from the sixth to the seventh year, or from the tenth to the eleventh year, should be no more difficult than the transition from the first to the second year.

In California, all three of these plans are being tried. The plan of the six year elementary school, followed by the six year high school, is being tried in Santa Rosa. The plan of a three year intermediate school course, including the seventh, eighth and ninth years, followed by an upper high school course of three years, is being tried in Berkeley, Los Angeles and Palo Alto. The plan of maintaining the traditional grouping of eight years in the elementary school and four years in the high school and introducing some secondary school work as early as the seventh year, is being followed in Alameda, Oakland, San Francisco, Santa Monica, Anaheim, Santa Ana, and San Diego.

So far, it is impossible to determine which of these plans is best, nor is it necessary that we do so. We are justified, however, in concluding that any of the three plans is better than the old arrangement. In the opinion of the Commissioner, it is not advisable for the State Board of Education to express a preference for any of the plans at this time. However, it may render the school system a service by recommending legislation aiming to secure greater flexibility in the school organization. Among other things, the law should definitely recognize the intermediate school, should provide for the granting of intermediate school certificates, legalize the introduction of certain school studies in the seventh and eighth years, and authorize the grouping of the seventh and eighth years with the ninth, or ninth and tenth years in intermediate schools. Of course, the organization of intermediate schools should be left optional with the various local school districts.

THE JUNIOR COLLEGE.

In 1911 the legislature passed an act enabling "the high school board of any high school district to prescribe postgraduate courses of study for the graduates of such high school, or other high schools, which course of study shall approximate the studies prescribed in the first two years of university courses." The act also authorizes the high school board to charge tuition for pupils living without the boundaries of the district and enrolling in such postgraduate courses.

The first school to take advantage of the provisions of this act was the Fresno High School. In this school the first two years of college work, approximating the "lower division" courses at the University of California, are offered. For convenience, the postgraduate department is known as the "junior college" department. Similar departments have been organized in Los Angeles, Fullerton, Santa Monica, Long Beach, Santa Barbara, Auburn, Le Grand and Bakersfield. The enroll-

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ment in postgraduate courses in the various high schools of these cities March 1, 1914, was as follows:

Junior College	Enrollment		
	First year	Second year	Total
Fresno	40	12	52
Los Angeles	[1]490	[1]40	[1]530
Fullerton	28		28
Santa Monica	11	17	28
Long Beach	58		58
Santa Barbara	23	13	36
Auburn	[2]	[2]	[2]
Bakersfield	10		10
Le Grand	2		2
Totals	662	82	744

[1]Includes all students enrolled in postgraduate courses.
[2]Auburn's "junior college" department will be established August, 1914.

In addition to those enrolled in "junior college" departments, there were 464 students enrolled in the first "postgraduate" year of high schools not maintaining "junior college" departments, and 113 in the second "postgraduate" year. In all there were 1,331 students enrolled in "postgraduate" high school courses in California.

The college courses offered in the various junior colleges include the following:

English (two years).
Latin (two years).
Modern Languages (two years each).
Mathematics, including Solid and Spherical Geometry (one half year), Synthetic Protective Geometry (one half year), Plane Analytical Geometry (one half year), Differential and Integral Calculus (one year), Advanced Algebra (one half year).
Surveying (one year).
Advanced Physics (one year).
Organic Chemistry (one year).
Qualitative Chemical Analysis (one half year).
Quantitative Chemical Analysis (one half year).
History, including Modern European History (one year), Industrial and Institutional History (one year), General History (one year), Western American History (one year), History of the Nineteenth Century (one year).
Logic and Psychology (one year).
Economics (one year).
Sociology (one year).
Advanced Agriculture (two years).
Advanced Shop Work (two years).
Drawing (two years).

In all of the high schools, the "junior college" department is quite closely related to the high school. In fact, one of the purposes of the "junior college" is to secure a closer articulation of college and high school work. An arrangement whereby the "junior college" instructor teaches some of the high school classes, promotes articulation. However, the "junior college" courses are given only by teachers who are

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specially equipped for the work, many of them holding advanced academic degrees. The maintenance of a close relation to the high school is also more economical. Where the junior college is organized on this basis, the cost per student for instruction in the "junior college" department is little more than the cost per student in the high school. In smaller institutions, the cost is kept within reasonable limits by giving certain courses in alternate years.

The advantages claimed for the "junior college" department are many. In the latest announcement of the Santa Barbara junior college, we find the advantages stated as follows:

"It offers peculiar advantages, first, to the student who can not afford to live away from home; second, to the young and immature student who is not yet ready to cope with the problems incident upon life at a large university; third, to the student who has failed to get his recommendation for college but who, by faithful and consistent study, may prove himself ready for advanced work, and fourth, to the student who does not intend to enter college, but who desires to continue his study along certain lines."

That it is possible for the "junior college" department to do work comparable with that done in the lower division classes at the university, is shown by the records of students entering the upper division classes at the University of California from the Fresno "junior college" department. Mr. Frederick Liddeke in a recent article discusses this phase as follows:

"There is encouragement in that the 'junior college' scholars from Fresno High School have been admitted to advanced standing at the university and have uniformly made good, judging from the reports of their first semester. No studies have had to be repeated and there have been no failures in any subject. This year, six of Fresno's college department entered the University of California—four of them as sophomores after one year's postgraduate work, two as juniors after two years. The latter even excelled with high rank in their first semester, which facts should go to show that good high school instructors doing intensive work with small classes can do safe college work."

It is a matter for congratulation that smaller communities have not undertaken the organization of junior colleges. It may be that this is due to the fact that the "junior college" is still in the stage of experiment. After the "junior college" is more firmly established, many ambitious communities may be tempted to establish "junior college" classes without the means necessary to properly maintain them. There is a double danger in this. The high school may be weakened to strengthen the "college" courses, or the college courses may be given under such unfavorable circumstances that they will not be worth while. It may be that legislation limiting "junior college" courses to districts

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having a fixed minimum of assessed valuation, or to high schools having a fixed minimum of enrollment, will be necessary.

It should be recognized that the advantages of the "junior college" are not limited to the field from which it draws its students. It is of advantage to the state at large because it makes for better citizenship. It is of advantage to the state in a narrower sense because it relieves the state of the taxation necessary to educate a large number of students, many of whom would otherwise be enrolled in the state university. It is only just, therefore, that the state should contribute the greater part of the funds necessary to support "junior college" departments. The law should also be amended so that the cost of educating "junior college" students residing in other high school districts shall be estimated annually, added to the high school tax budget in such high school districts, and paid into the fund of the high school district maintaining the "junior college." That tuition in the "junior college" should be paid by the community, not by the individual, is a proposition thoroughly consistent with the broad principles upon which free education is predicated.

THE SMALL HIGH SCHOOL.

In his first report to the State Board of Education, the Commissioner stated that one of the most important problems in secondary education is the problem of assisting the smaller high schools, located in the rural districts, to adjust themselves to community needs. In compiling statistics obtained by the survey questionnaire, the Commissioner found that of the 257 high schools in the state, 132 enrolled less than one hundred students.

The grouping of schools according to enrollment is as follows:

Schools enrolling 100 pupils or less	132
Schools enrolling 100 to 200 pupils	68
Schools enrolling 200 to 500 pupils	34
Schools enrolling 500 to 1,000 pupils	10
Schools enrolling more than 1,000 pupils	13
Total	257

Of the 42,852 students (average daily attendance) in California high schools in 1912-1913, no less than 27,866 were attending high schools in cities having city superintendents of schools. There were only 14,986 students attending the smaller high schools of the state. In spite of the fact that in 1910 the population in California cities of 10,000 and over was only 32 per cent greater than the population outside of these cities, the high schools in cities of 10,000 and over have a high school attendance which was 80 per cent greater.

An incomplete survey of the small high schools shows that they need and deserve the careful attention of state school authorities. The

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course of study in many of these schools differs very little from the course in the high schools of the early eighties. Most of the work is of the academic type, because teachers of these subjects are more easily obtained, and it costs less to offer this kind of work. The science laboratories are not adequately equipped in many schools and are improperly equipped in others. Wherever commercial subjects, music, art, agriculture or similar branches have been introduced, the work is frequently done by a teacher whose specialty lies in an unrelated branch. In spite of these drawbacks, some of the smaller schools are doing excellent work, but the work in the old traditional academic branches is much better done than in the more modern branches. Speaking generally of the smaller high schools, there is need for improving conditions, and to this end a close survey of the situation should be made.

The chief reason for the failure of the rural high school more fully to adjust itself to rural conditions, is lack of continuity in the administrative and teaching force. While principals and teachers in the larger high schools hold their positions for years, the average term of principals and teachers in the smaller high schools is perhaps less than three years. There are several smaller high schools of the state in which a complete change of teaching force was made at the close of the last year.

In such circumstances, it is quite impossible for the rural high school to develop a continuous or definite policy based on community needs. This accounts for the shortcomings observable in many of the high schools of smaller communities.

The reasons for changes in the teaching force can not be set forth fully in this report. However, most of the changes are due to the ambition of teachers to obtain better salaries and better living conditions. The salaries paid to principals of high schools enrolling less than one hundred students, range from $1,100 to $2,400 per annum, the average being less than $1,800 per annum. The salaries of high school teachers in these schools range from $810 to $1,400 per annum, the average being about $1,100. Although the salaries are not very attractive, many smaller communities add to the discouragement of good teachers by failing to provide satisfactory boarding places. Teachers of culture and refinement will not remain in a community which has not sufficient interest in the high school to offer its teachers a comfortable home.

A few of the reasons for the failure of many smaller high schools to meet community needs have been set forth. However, most of the reasons may be resolved into one, namely, lack of funds. The young people of rural districts are entitled to more than they are getting in the smaller high schools, but many communities can not afford to spend more money on secondary education. They must look to the state for help. The wealthy communities of the state must be called upon to give greater assistance to the smaller high schools if they are to advance their

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standards and increase their facilities. The smaller communities and the rural districts are contributing mightily to the upbuilding of these larger centers, in an industrial and financial way, and it seems only fair that the larger centers should aid in educating the children of these communities. Education is a state function, as well as a local function, and the state must, in its own interest, assist the local communities when they can not maintain standard schools for the education of their children.

A COUNTY HIGH SCHOOL FUND.

The state is now raising $15 per annum for each student of average daily attendance in the high schools; the high school districts are raising the remainder of the cost of educating each student. In the smaller high schools the average cost per pupil based on average daily attendance is almost twice as great as it is in cities. In 1912-1913, the average cost per student for the entire state was $90.90, although some of the smaller communities expended more than $300 per student. It will be observed that the state is contributing only a small share to the support of its high schools.

However, the Commissioner feels that it will not be necessary to increase the state high school fund, if other sources of revenue can be found. He suggests that a county high school tax be authorized by law, such tax to be levied at a rate sufficient to raise at least $60 per student of average daily attendance. The fund should be apportioned in a manner similar to that in which the state high school fund is apportioned. A fixed flat apportionment should be made to each high school, regardless of size, and the balance distributed according to average daily attendance. This suggestion is founded on the fact that in various counties large areas not included in any high school district, escape all high school taxes. Other large areas pay only a small tax for high school privileges provided for their children by neighboring communities at great expense. In Solano County, for instance, property within high school districts is taxed from 17 to 56 cents per $100 of assessed valuation for the maintenance of high schools. Several of the high school districts are paying an additional rate for interest and redemption of bonds. The territory outside of high school districts is paying only 5 cents per $100 of assessed valuation for maintenance of high schools, although its children enjoy high school privileges equal to those of residents within the various districts.

Many protests against this arrangement have been made to the Commissioner from various parts of the state. In one community, for example, the high school is crowded to overflowing and the district is heavily bonded for building and grounds. About one hundred pupils from outside territory are in attendance. An effort to induce the out-

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lying territory to enter the district so that bonds for a new building might be voted, was defeated because the residents outside found it cheaper to remain outside. In the circumstances, it seems just that a general county levy for high school purposes be made, leaving local communities to bear the expense in excess of state and county apportionments. We have a *state* common school fund, a *county* common school fund, and a *district* common school fund. We have the same arrangement of high school funds, except that the *county* fund is omitted. The Commissioner recommends that a thorough investigation of the plan for a county high school fund be made, and that if the plan be found practicable, a law providing for a county high school fund be recommended to the legislature.

If a county high school fund is created, it will be necessary to provide safeguards against the establishment of weak high schools in the hope that they will derive practically all of their support from the county fund. A weak high school is little better than no high school at all, consequently it is not to be encouraged. No community should undertake to organize a high school unless it is able and willing to contribute substantially to its maintenance. Since it is not possible for a high school having less than four teachers to offer a satisfactory course of study, no high school established for four years or more should be entitled to receive the full flat apportionment from the county high school fund unless it employs at least four teachers. A school that employs less than four teachers should receive an apportionment according to its average attendance, and in addition, should receive one fourth of the fixed flat apportionment for each teacher employed. Provision should also be made that at least 90 per cent of the county high school fund and all of the state high school fund shall be set aside for the payment of teachers' salaries, leaving most of the cost of upkeep to be borne by the local community.

Such safeguards will not work a hardship on the small high schools now established in the state. The survey questionnaire of March, 1914, brought out the fact that 221 of the 249 high schools reporting employed four or more teachers. Of the 28 schools employing less than four teachers, 20 employed three teachers, and 8 two teachers. There were enrolled in these schools 762 pupils, the average enrollment being 27. Fifteen of the twenty-eight schools have been established within the last four years and each will probably employ four teachers before it enters upon its fifth year. These fifteen schools enroll 402 pupils, leaving only 360 pupils in established high schools having less than four teachers. If a county high school fund is created, nearly all of these schools will be able to employ four teachers.

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CONCERNING HIGH SCHOOL TEXTBOOKS.

The matter of high school textbooks is governed by section 1750 of the Political Code, reading as follows: "The high school board of each district, which has not already done so, shall adopt a list of textbooks for use in such high school district of textbooks prescribed by the State Board of Education, and the clerk or secretary of said board shall certify to the superintendent of schools having jurisdiction over such high school, a list of all textbooks so adopted or previously adopted by order of said board or then in use in said high school; and no change shall thereafter be made in said list of books for the term of four years after adoption; provided, that the high school board may, at a regular meeting, adopt for a period of not less than four years such additional or other textbooks as they may deem best, but the same shall not be changed for four years. The order of adoption shall be entered upon the minutes of the board, and a certified copy thereof shall be at once transmitted by the clerk or secretary of the high school board of trustees to the superintendent of schools having jurisdiction over such high school. The said board shall enter into a written contract with the publisher of the textbooks so adopted for their use or purchase during such period."

In pursuance of this law the State Board of Education has appointed two expert California school teachers as readers in each of the subjects usually taught in high schools. The board has referred to these expert teachers all proposed new textbooks and all questions relating thereto; has asked a report from them to the Commissioner of Secondary Schools on June 1st; and from these reports has prepared a new list, by adding desirable books and cutting off unused or undesirable books. The new list thus prepared was presented to the State Board of Education and recommended by them in the month of June for use during the ensuing year. All books adopted by the high school authorities in pursuance of law as regular high school textbooks must be chosen from this list. If supplemental or illustrative material not found on the list be found necessary, it should be purchased by the school and furnished without expense to the pupils.

The official list of high school textbooks for 1914-1915 was compiled in accordance with the directions of the board, to include the following:

(1) All textbooks authorized for use by the former State Board of Education in its list of July, 1912, except such books as were stricken therefrom by the committee on textbooks, and such books as were dropped from the list automatically in accordance with the rule hereinafter set forth.

(2) All textbooks authorized for adoption by the State Board of Education at a meeting held January 15, 1914.

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(3) All textbooks, not included in (1) and (2) above, which were adopted by high school boards between November, 1912, and January 1, 1914, during a large part of which time there was no state board to prescribe a list of textbooks from which adoptions could be made.

(4) All textbooks placed upon the official list, by order of the State Board of Education, at the regular June meeting.

A considerable number of textbooks were dropped from the list in accordance with the following regulation: "Any book which has been listed for a period of two years before the date of making the annual official list, and which has not, during this time, been adopted by a high school board in California, shall be dropped from the list, provided that all textbooks now being used in the high schools of California shall be retained on the official list."

The official list of high school textbooks for 1914-1915 has been compiled in accordance with these regulations and issued as "Bulletin No. 3," and "Bulletin No. 4."

A form of order of adoption for high school boards has also been prepared, printed and distributed. General directions for high school boards, principals, publishers and readers, together with questions and answers concerning the administration of the law, were published and distributed as "Secondary School Bulletin No. 1."

The board has also adopted the following regulation:

The Commissioner of Secondary Schools shall require of the principal of each high school in California, during the month of April, 1914, and during the month of September, 1914, and the month of September of each year thereafter, an official list of high school textbooks in use in said high school. In furthering this purpose, he shall prepare and distribute a form of official report on textbooks, which shall include a statement when each book was adopted.

In accordance with this regulation most of the high schools have submitted lists of books in use, together with a statement when each book was adopted. In case no formal adoption has been made, the Commissioner has held that the book was constructively adopted on the date when pupils were required to purchase it. In administering the law, he has been obliged to give more than fifty different rulings.

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Following is a list of expert readers appointed by the State Board of Education:

ENGLISH:
Fannie W. McLean, Berkeley High School.
A. J. Cloud, Deputy Superintendent of Schools, San Francisco.

HISTORY, CIVICS, ECONOMICS:
J. R. Sutton, Oakland High School.
John Nowell, Fresno High School.

BIOLOGY, PHYSIOLOGY:
Chas. S. Morris, Palo Alto High School.
Elizabeth D. Palmer, Los Angeles High School.

GERMAN:
Elise Wartenweiler, Berkeley High School.
Laura W. Friedrich, Pomona High School.

FRENCH:
Josephine Ginaca, Los Angeles High School.
Emma M. Garretson, Alameda High School.

COMMERCIAL SUBJECTS:
B. F. Allison, Polytechnic High School, Oakland.
Ira W. Kibby, Red Bluff High School.

MATHEMATICS:
A. C. Olney, Santa Barbara.
E. E. Brownell, Gilroy High School.

MANUAL TRAINING, TECHNICAL AND INDUSTRIAL ARTS:
Elmer H. Whittaker, Santa Barbara, California.
Frank K. Barthel, Supervisor Manual Training, San Francisco.

PHYSICS, CHEMISTRY:
Anthony Rose, Modoc County High School, Alturas.

LATIN, GREEK:
H. O. Williams, Sacramento High School.
F. O. Mower, Madera High School.

SPANISH:
Ruth Henry, San Jose High School.
Marie Lopes, San Gabriel.

PHYSICAL GEOGRAPHY, GEOLOGY, ASTRONOMY:
Edna E. Rowell, Fresno High School.
C. K. Studley, State Normal, Chico.

AGRICULTURE:
J. B. Corcoran, State Normal School, Arcata.
H. F. Tout, High School, Bakersfield.

MUSIC:
Gertrude B. Parsons, Los Angeles.
Kate C. Wood, San Jose High School.

DOMESTIC SCIENCE, HOUSEHOLD ARTS:
Louise K. Willett, Sacramento High School.
Maud Murchie, State Normal, San Jose.

The Commissioner has found some difficulty in enforcing section 1750, of the Political Code, owing to the loose manner in which it was drawn. He recommends that the section be amended so as to make its meaning clear, and thus avoid the necessity for so many administrative rulings. A more definite recommendation covering this matter will be made before the meeting of the legislature.

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LETTER OF TRANSMITTAL.

To the Honorable STATE BOARD OF EDUCATION,
Sacramento, California.

LADIES AND GENTLEMEN:

Pursuant to law, I hereby submit to you the first annual report of the Commissioner of Industrial and Vocational Education. Being the first incumbent of the office, and not having assumed the duties of the same until January 1, 1914, my report will deal only with the last half of the fiscal year, 1913–1914.

The office which I have the honor to fill, being new, had no established functions other than those relating to the visitation and inspection of industrial and vocational schools receiving state aid, as provided by section 1520 of the Political Code. Consequently, I have made it a part of my duty:

First.—To encourage the introduction and extension of vocational education by counselling with boards of education, superintendents of schools, and others interested in the subject, and by lecturing before bodies of teachers, school trustees, and other organizations interested in educational, social, or civic matters.

Second.—To influence and encourage teachers and school officials to modify the regular academic subjects of the curriculum in such a manner as to make them more practical and consequently more useful.

Third.—To make a statistical survey of the actual condition of the manual, domestic, and vocational arts in the public schools of the state, and to segregate and make this material available to legislators, educators, and others interested in the subject.

Fourth.—To seek for those schools which have successfully developed vocational courses in the various subjects and advertise them to school authorities desiring the information.

Fifth.—To investigate the conditions under which county boards of education grant certificates to teach the special subjects, to the end that a more uniform standard among the various counties may be established.

Sixth.—To make a survey of the general educational situation with the purpose of discovering the efficiency of the present school system: (*a*) in dealing with children who possess different mental and physical traits; (*b*) in dealing with children who possess different capabilities within these traits; and (*c*) in dealing with children who are differently situated financially.

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Seventh.—To consult freely with those in the state and elsewhere who have made a study of vocational education, and later to formulate for your honorable body what, in my judgment, is demanded by the situation in order that the public schools of California may more adequately provide for the training for their life work of those boys and girls who do not secure a professional or other vocational training in an institution of higher learning.

Very respectfully yours,

EDWIN R. SNYDER,
Commissioner of Industrial and Vocational Education.

VISITATION AND LECTURES.

In accordance with the above plan of procedure, your Commissioner of Industrial and Vocational Education visited 53 schools in 11 districts, including most of the larger cities of the state, and delivered 29 lectures in 13 different communities of the state.

The total expense to the state for these visits and lectures was $453.20, less $8.20 in scrip on hand and rebates on $111.80 worth of scrip. In addition to the above, $74.85 was expended upon account of county institute work. Your Commissioner was reimbursed in this amount by the four counties involved.

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The Situation in the Elementary and High Schools as it Relates to the Need for Vocational Education.

INTRODUCTORY STATEMENT.

For many years it has been a matter of common knowledge that the American public school system fails adequately to provide for the training of a large proportion of the children of the country. Many reasons have been advanced for this failure. Among others have been poor teaching; lack of ability, lack of interest, or indolence upon the part of the pupil; lack of school opportunity; or, lack of cooperation upon the part of parents. Strenuous efforts have been made from time to time to correct these faults. During this period school opportunities have been extended so that almost every child in the land has access to a school located within a reasonable distance of his home. In most of the states of the Union, and in California in particular, compulsory educational laws have been enacted and are in general well enforced. Moreover, those who enforce the attendance and child labor laws of the state agree that in general the parents are not only willing but anxious that their children shall attend school. Likewise, the compensation and qualifications of teachers have been very greatly advanced in recent years. Indeed, it may be safely stated that, upon the whole, the children of California attend the schools regularly and are instructed by well trained, conscientious teachers.

Every effort has been made by these teachers to enlist the interest of the children in their work. From time to time new content subjects have been introduced, such as music, drawing, nature study, sloyd, manual training or cabinet work, art metal work, domestic science, and domestic art, and in addition, many of the high schools have offered courses in turning, in forging, in molding and in machine shop work. While all of these improvements of schools and teachers and methods, together with the compulsory education law, the method of distributing funds, and the addition of new subjects have improved the situation, the fact still remains that, although approximately all of the children remain in school eight years and many of them much longer, less than one half of them complete the eight years' course. But the evidence of the failure of the public school system to fit the needs of all children is only partly shown by the number of failures to receive promotion and graduation. Many of the children who accept the situation and complete the work of the grades, as presented by the traditional school, fail to receive the training they most need for their future work as men and women.

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A STATISTICAL STATEMENT.

Much controversy has arisen lately over the meaning of the figures represented by the enrollment of children by grades. Some claim that the scholastic mortality of children in the first eight grades is greater than seventy per cent. Others claim that the scholastic mortality is negligible. Because of this disagreement, I venture to present to you certain school statistics of California cities and counties with an interpretation which I believe to be ultra conservative.

It is not uncommon in interpreting such statistics to compare the state enrollment in the various grades and the number of graduates with the enrollment in the first grade. This method is decidedly inaccurate, because pupils may be enrolled only once during the academic year. When they are transferred or promoted, they are not re-enrolled. In schools where promotions occur semi-annually and where children are received into the first grade in the middle of the year, three half-year classes are enrolled in the first grade, and but two half-year classes in the other seven grades. As a result, the enrollment in the first grade does not represent the number of pupils belonging to it at any given time, but may in certain cases represent one and one-half times the normal number belonging to it.

Another source of error is the comparison of the number *belonging* in one grade, *e. g.*, in the eighth grade, with the number *belonging* in the first grade, or in any other grade. The error here is due to the fact that the retarded pupils are included in these grade statistics. As shown by the accompanying retardation charts, the number of retarded pupils belonging to the first grade is always great, though it varies considerably in the different localities, depending largely upon the proportion of foreign children represented, and upon the scholastic standards maintained.

The only method of obtaining absolutely correct figures and comparisons would be to secure the scholastic history of each child from the time he enters until he leaves school. At present, such information is not to be had, but it will be available for certain of the cities in the near future, as a number of them have established continuous record systems. The enrollment by grades and ages combined is a good index of retardation, but at present the segregation of such statistics has been made and is available only for a few cities.

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TABLE I.

Statistics of Children Belonging in Each Grade in Elementary Schools in Twenty-nine California Cities for the Month of October or November, 1913.

City	Grade one	Grade two	Grade three	Grade four	Grade five	Grade six	Grade seven	Grade eight	Grade average
Los Angeles	8,482	6,856	6,500	6,376	5,383	5,058	4,925	3,901	5,854
San Francisco	8,179	6,734	5,649	5,637	5,077	4,338	3,403	2,598	5,187
Oakland	3,676	2,593	2,575	2,473	2,363	2,162	1,679	1,323	2,348
San Diego	1,365	992	957	942	814	819	714	645	903
Sacramento	1,225	897	905	897	837	754	692	570	845
Fresno	1,028	837	857	707	705	648	529	361	707
Berkeley	803	688	671	674	657	649	580	551	657
San Jose	1,032	704	596	616	545	451	421	361	589
Pasadena	744	597	609	524	523	550	522	508	570
Long Beach	663	536	526	626	529	522	480	452	540
Alameda	475	384	438	426	428	353	306	265	383
Stockton	557	401	447	416	383	324	253	271	380
Bakersfield	*837	271	286	252	242	188	178	120	296
San Bernardino	471	269	302	300	257	259	245	145	280
Riverside	374	307	297	278	257	231	247	213	274
Santa Ana	307	263	260	282	205	196	200	208	239
Richmond	363	293	279	253	247	193	144	123	236
Chico	327	237	257	254	213	197	190	167	229
Pomona	300	219	226	246	232	195	206	158	222
Santa Monica	289	226	246	211	210	201	173	152	212
Eureka	278	227	214	211	208	186	146	145	200
Santa Barbara	305	165	196	195	167	133	126	109	174
Santa Cruz	217	170	188	179	143	174	127	125	165
Vallejo	208	173	184	185	170	126	126	70	155
Modesto	221	156	195	153	164	106	111	88	149
San Luis Obispo	119	94	106	103	79	94	65	38	86
Palo Alto	109	57	68	63	79	78	66	60	72
Oroville	75	80	66	68	67	68	67	48	67
San Buenaventura	91	85	71	56	64	55	58	50	66
Totals	33,120	25,011	24,168	23,003	21,248	19,288	16,968	13,825	22,092

*Includes 497 receiving grade pupils.

TABLE II.

Relative Number of Children Belonging in Each Grade, in Five Counties, and in the State of California, When Grade Average is Reduced to One Hundred.

County	Grade one	Grade two	Grade three	Grade four	Grade five	Grade six	Grade seven	Grade eight	Graduated 1913	Grade average
Fresno	3,453	2,229	2,112	2,076	1,826	1,738	1,510	1,172	1,039	2,008
Mendocino	745	509	496	504	442	429	429	301	264	481
Nevada	377	260	269	286	333	239	227	226	129	276
Riverside	1,191	772	734	725	668	628	604	551	227	732
Santa Clara	2,689	1,682	1,784	1,584	1,498	1,305	1,200	1,118	820	1,591
Totals	8,405	5,452	5,345	5,175	4,767	4,339	3,970	3,368	2,479	5,089
State of California	81,031	49,135	48,856	46,917	43,558	38,929	34,923	34,531	21,904	47,112

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TABLE I A.

DERIVED FROM TABLE I.

Relative Number of Children Belonging in Each Grade in Elementary Schools, in Twenty-nine California Cities, When Grade Average is Reduced to One Hundred.

City	Grade one	Grade two	Grade three	Grade four	Grade five	Grade six	Grade seven	Grade eight	Grade average
Los Angeles	145	109	111	109	92	86	84	67	100
San Francisco	158	130	109	109	98	84	66	50	100
Oakland	157	110	110	105	103	92	72	56	100
San Diego	151	110	106	104	90	91	79	71	100
Sacramento	145	106	107	106	99	89	82	67	100
Fresno	145	118	121	100	100	92	75	51	100
Berkeley	122	105	102	103	100	99	88	84	100
San Jose	175	120	101	105	93	77	71	61	100
Pasadena	131	105	107	92	92	96	92	89	100
Long Beach	123	99	97	116	98	97	89	84	100
Alameda	124	100	114	111	112	92	80	69	100
Stockton	147	106	118	109	101	85	67	71	100
Bakersfield	*283	92	97	85	82	64	60	41	100
San Bernardino	168	96	108	107	92	93	88	52	100
Riverside	136	112	108	101	94	84	90	78	100
Santa Ana	128	110	109	118	86	82	84	87	100
Richmond	154	124	118	107	105	82	61	52	100
Chico	143	103	112	111	93	86	83	73	100
Pomona	135	99	102	111	105	88	93	71	100
Santa Monica	136	107	116	100	99	95	82	72	100
Eureka	139	113	106	106	104	93	73	73	100
Santa Barbara	175	95	113	112	96	76	72	63	100
Santa Cruz	132	103	114	108	87	105	77	76	100
Vallejo	134	112	119	119	110	81	81	45	100
Modesto	148	105	131	103	110	71	74	59	100
San Luis Obispo	138	109	123	120	92	109	64	44	100
Palo Alto	151	79	94	88	110	108	92	83	100
Oroville	112	119	99	101	100	101	100	72	100
San Buenaventura	138	129	108	85	97	83	88	76	100
Totals	150	113	109	107	96	87	77	63	100

*Includes 497 receiving grade pupils.

TABLE II A.

DERIVED FROM TABLE II.

Relative Number of Children Belonging in Each Grade When Grade Average is Reduced to One Hundred, in Five Counties, and in the State of California.

County	Grade one	Grade two	Grade three	Grade four	Grade five	Grade six	Grade seven	Grade eight	Graduated 1913	Grade average
Fresno	171	111	105	103	91	87	75	58	52	100
Mendocino	155	106	103	105	92	89	89	63	55	100
Nevada	137	94	97	104	121	87	82	82	47	100
Riverside	163	105	100	99	91	86	83	75	31	100
Santa Clara	166	106	109	100	94	82	75	70	52	100
Totals	165	107	105	102	92	85	78	66	49	100
State of California	172	104	104	100	92	83	74	73	46	100

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TABLE III.

Statistics of Pupils Belonging to Each Grade in High Schools in Twenty-four California Cities, for the Month of October or November, 1913.

City	Grade nine	Grade ten	Grade eleven	Grade twelve	Graduated 1914
Los Angeles	3,493	2,109	1,622	1,147	-------
San Francisco	1,589	915	514	379	351
Oakland	1,171	815	411	286	266
San Diego	608	373	251	182	160
Sacramento	421	258	220	147	-------
Fresno	293	186	141	123	-------
Berkeley	488	409	336	280	275
San Jose	395	259	195	177	-------
Pasadena	458	412	318	187	175
Long Beach	394	279	210	146	129
Alameda	209	137	81	68	-------
San Bernardino	199	105	76	69	-------
Riverside	232	196	115	112	-------
Santa Ana	271	186	136	97	94
Richmond	98	57	28	34	-------
Chico	165	107	70	59	57
Pomona	159	130	105	83	92
Santa Monica	169	112	81	81	-------
Eureka	134	75	76	54	47
Santa Barbara	152	98	53	49	53
Santa Cruz	134	74	56	66	65
Vallejo	80	70	23	18	17
San Luis Obispo	60	44	12	29	27
Palo Alto	91	65	48	78	-------
Totals	11,408	7,401	5,178	3,961	-------

TABLE IV.

Statistics of Pupils Enrolled in Each Grade in High Schools in Five Counties, and in the State of California, for the Years 1912-1913.

County	Grade nine	Grade ten	Grade eleven	Grade twelve	Graduated 1913
Fresno	766	453	300	290	227
Mendocino	167	100	68	54	50
Nevada	128	78	47	38	31
Riverside	443	276	237	175	142
Santa Clara	802	556	468	384	341
Totals	2,306	1,463	1,120	941	791
Corrected	2,253	1,463	1,120	941	791
State	26,933	13,875	9,198	8,073	6,557
Corrected	21,361	13,875	9,198	8,073	6,557

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TABLE V.

Statistics of Pupils Enrolled in Successive Grades in High Schools for Four Successive Years, in Twenty-four California Cities.

City	Grade nine 1911	Grade ten 1912	Grade eleven 1913	Grade twelve 1914	Graduated 1914
Los Angeles	3,234	1,515	1,446	1,147	-------
San Francisco	2,076	1,089	472	379	351
Oakland	1,262	704	373	286	286
San Diego	556	280	239	182	160
Sacramento	397	356	238	147	-------
Fresno	328	178	125	123	-------
Berkeley	486	390	391	280	275
San Jose	549	320	256	177	-------
Pasadena	432	412	323	187	175
Long Beach	360	217	179	146	129
Alameda	227	155	109	68	-------
San Bernardino	153	117	74	69	-------
Riverside	195	155	129	112	-------
Santa Ana	191	121	127	97	94
Richmond	74	52	39	34	-------
Chico	88	83	78	59	57
Pomona	188	123	111	83	92
Santa Monica	156	89	73	81	-------
Eureka	126	53	48	54	47
Santa Barbara	147	90	56	49	53
Santa Cruz	155	94	83	66	65
Vallejo	65	47	23	18	17
San Luis Obispo	48	26	33	29	27
Palo Alto	85	81	75	78	-------
Totals	11,528	6,747	5,100	3,951	-------
Corrected	10,345	6,747	5,100	3,951	-------

TABLE VI.

Statistics of Pupils Enrolled in Successive Grades in High Schools for Four Successive Years, in Five Counties, and in the State of California.

County	Grade nine 1910	Grade ten 1911	Grade eleven 1912	Grade twelve 1913	Graduated 1913
Fresno	519	361	295	290	227
Mendocino	121	81	59	54	50
Nevada	104	48	28	38	31
Riverside	292	245	171	175	142
Santa Clara	788	629	465	384	341
Totals	1,824	1,364	1,018	941	791
Corrected	1,713	1,364	1,018	941	791
State	18,424	11,125	8,024	8,073	6,567
Corrected	17,133	11,125	8,024	8,073	6,557

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TABLE III A.

DERIVED FROM TABLE III.

Relative Number of Pupils Belonging to Each Grade in High Schools in Twenty-four California Cities When Number in Ninth Grade is Reduced to One Hundred.

City	Grade nine	Grade ten	Grade eleven	Grade twelve	Graduated 1914
Los Angeles	100	60	46	33	-------
San Francisco	100	58	32	24	22
Oakland	100	70	35	24	23
San Diego	100	62	42	30	27
Sacramento	100	61	52	35	-------
Fresno	100	63	48	42	-------
Berkeley	100	93	77	64	63
San Jose	100	66	49	45	-------
Pasadena	100	90	69	41	38
Long Beach	100	71	52	37	33
Alameda	100	66	39	33	-------
San Bernardino	100	58	38	35	-------
Riverside	100	84	50	48	-------
Santa Ana	100	69	50	36	35
Richmond	100	58	29	35	-------
Chico	100	65	42	36	35
Pomona	100	82	66	52	58
Santa Monica	100	66	48	48	-------
Eureka	100	56	57	40	35
Santa Barbara	100	64	35	32	35
Santa Cruz	100	55	42	49	49
Vallejo	100	87	29	23	21
San Luis Obispo	100	73	20	48	45
Palo Alto	100	71	53	86	-------
Totals	100	65	45	35	

TABLE IV A.

DERIVED FROM TABLE IV.

Relative Number of Pupils Enrolled in Each Grade in High Schools in Five Counties and in the State of California, When Number in Ninth Grade is Reduced to One Hundred.

County	Grade nine	Grade ten	Grade eleven	Grade twelve	Graduated 1913
Fresno	100	59	39	38	30
Mendocino	100	60	41	32	30
Nevada	100	61	37	30	24
Riverside	100	62	53	39	32
Santa Clara	100	69	58	48	43
Totals	100	63	49	41	34
Corrected	100	65	45	41	35
State	100	51	34	30	24
Corrected	100	65	43	38	31

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TABLE V A.

DERIVED FROM TABLE V.

Relative Number of Pupils Enrolled in Successive Grades in High Schools for Four Successive Years, in Twenty-four California Cities, When Number in Ninth Grade is Reduced to One Hundred.

City	Grade nine 1911	Grade ten 1912	Grade eleven 1913	Grade twelve 1914	Graduated 1914
Los Angeles	100	47	45	35	-------
San Francisco	100	52	23	18	17
Oakland	100	56	22	23	21
San Diego	100	50	43	33	29
Sacramento	100	90	60	37	-------
Fresno	100	54	38	38	-------
Berkeley	100	80	80	58	57
San Jose	100	58	47	32	-------
Pasadena	100	80	75	43	41
Long Beach	100	60	49	41	36
Alameda	100	68	48	30	-------
San Bernardino	100	76	48	45	-------
Riverside	100	79	66	57	-------
Santa Ana	100	63	66	51	49
Richmond	100	70	53	40	-------
Chico	100	218	205	155	150
Pomona	100	65	59	44	49
Santa Monica	100	57	47	52	-------
Eureka	100	42	38	43	37
Santa Barbara	100	61	38	23	33
Santa Cruz	100	61	54	43	42
Vallejo	100	72	35	28	25
San Luis Obispo	100	54	69	60	56
Palo Alto	100	95	88	92	-------
Totals	100	59	43	34	
Corrected	100	65	49	38	

TABLE VI A.

DERIVED FROM TABLE VI.

Relative Number of Pupils Enrolled in Successive Grades in High Schools for Four Successive Years in Five Counties and in the State of California When Number in Ninth Grade Is Reduced to One Hundred.

County	Grade nine 1910	Grade ten 1911	Grade eleven 1912	Grade twelve 1913	Graduated 1913
Fresno	100	70	57	56	44
Mendocino	100	67	49	45	41
Nevada	100	46	27	37	30
Riverside	100	94	59	60	49
Santa Clara	100	80	59	49	43
Totals	100	75	56	52	43
Corrected	100	80	59	55	46
State	100	60	44	44	36
Corrected	100	65	47	47	38

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RETARDATION CHART, SANTA BARBARA CITY, 1914.

Age	GRADES								Total
	1	2	3	4	5	6	7	8	
5-6	7								7
6-7	107	2	1						110
7-8	138	34	5						172
8-9	39	63	45	3					150
9-10	20	39	70	22	1				152
10-11	8	23	39	61	24	4			159
11-12	4	9	32	64	54	23	1		187
12-13	3	3	10	27	42	44	20	3	152
13-14			11	8	29	36	51	31	166
14-15	1		1	6	16	16	33	38	111
15-16	1		1	6	7	18	23	27	79
16-17					3	8	7	3	21
17-18			1				2	2	5
18-19				1				1	2
Totals	323	173	216	198	176	144	137	105	1,472
Retarded	76	74	95	112	97	73	65	33	625
Per cent	24	43	44	56	55	51	47	31	42

Retarded one year, 319, or 22 per cent
Retarded two years, 173, or 12 per cent
Retarded three years, 73, or 5 per cent
Retarded four or more years, 60, or 4 per cent

RETARDATION CHART, ALAMEDA CITY, 1911.*

Age	GRADES								Total
	1	2	3	4	5	6	7	8	
6-7	221	6							227
7-8	126	156	11						293
8-9	29	113	115	9	1				267
9-10	5	65	160	81	11				322
10-11	1	20	64	104	99	4			292
11-12	2	2	19	76	111	62	6		278
12-13		2	13	55	75	112	75	9	340
13-14	1	2	1	13	41	81	112	63	314
14-15	1	2	1	3	16	39	95	75	232
15-16			1	1	2	15	47	54	120
16-17		1			1	4	8	52	66
17-18							1	6	7
Totals	386	369	385	342	357	317	344	259	2,759
Retarded	39	94	99	148	135	139	151	112	917
Per cent	10	25	26	43	37	44	43	43	33

Retarded one year, 539, or 20 per cent
Retarded two years, 278, or 10 per cent
Retarded three years, 74, or 3 per cent
Retarded four years or more, 26, or 1 per cent

*Alameda city school report, 1911.

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A very good but less accurate method is to correct for mortality and permanent disability and then compare the numbers enrolled in each of the various grades for any given year with the number of entrants in the first grade for the corresponding year. But here again the necessary figures are not available.

Because of these limitations and in view of the fact that the state enrollment is slightly affected by errors made by the re-enrollment of transferring pupils, the numbers *belonging* to the various grades for a given month in twenty-nine of the principal cities of the state are used in Table I, instead of such enrollment. In addition, the grade enrollments in five typical counties of the state containing no large cities together with similar statistics for the State of California, are given in Table II. Also the retardation charts of two small California cities are presented. It is the desire of the Commissioner in presenting these figures, to give not only a *conservative* but a *safe* estimate of the proportion of pupils who do not fit the present course and the present system in vogue in our elementary schools. Consequently, in reducing these statistics, the figures for the various grades were combined and divided by eight—the number of grades. The quotient thus obtained was then corrected for mortality* and entered in the columns marked "grade average."

THE RELIABILITY OF THE STATISTICAL EVIDENCE.

It is the belief of the Commissioner that these averages fall short of representing the number of children who should be found in each grade. This belief is founded on the following considerations:

First.—That those children who are not in attendance upon the elementary schools, but who should be, are probably out because they do not fit the system, and their inclusion would only raise the "grade average," which would probably lower the proportionate number belonging to the upper grades.

Second.—That almost the entire number of pupils over fifteen years of age (about seven per cent of the enrollment as shown by the accompanying retardation charts), is to be found in the last three grades of the course.

Third.—That in all probability the inclusion of the enrollment of the private and parochial schools would not materially affect the *relative* number of children enrolled in any given grade of the public elementary school, since these schools usually maintain the same grades and probably draw to them in about the same proportions as the public elementary schools. Reference to the two accompanying retardation charts establishes the fact that the number of children, of each age

*In 1913 the total mortality of children, 5 to 14 years of age, was 1,048, for the entire state. Dividing the total enrollment in the elementary schools of the state for the same year by this number, we get an average of one death for each 360 children enrolled.

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enrolled, remains practically constant throughout the eight years. The apparent falling off between the ages of 14 and 15 is due to the fact that a large number of children finish the course before they have reached this age.

Fourth.—That the number of mentally defective children included in these figures is too small to materially affect the relative proportions in the grades, because as a rule these children, if they enter school at all, remain only for one or two years.

Fifth.—That usually a failure because of illness retards the child but one half, or at most, one year.

Taking all of these possibilities of error into consideration, it would seem that the claim is well founded that the *grade average given* is below the real grade average. Other factors, such as immigration and emigration, affect the situation, however, barring foreign immigration, they probably have but slight effect upon the results. The effect of the latter is clearly shown by the relatively large number of children to be found in the first grade in each of the larger cities. The piling up here is due chiefly to language difficulty. However, the number of retardations on account of inability to handle the language, is by no means large enough to account for the large decrease in numbers in the upper grades.

The statistics of graduation from city schools were not secured in time to incorporate them, but from those received it would seem that rarely more than ninety per cent of those belonging to the eighth grade graduated, and the percentages ran as low as seventy-five.

THE DERIVED TABLES.

Tables I A and II A were derived from Tables I and II. The grade average has been reduced in each case to 100 and all grade numbers have been reduced in the same proportion. To illustrate the table shows that in Los Angeles there are 67 or less children in the eighth grade for each 100 who should be there. Stating it another way, there are in the eighth grade less than 67/100 of the children who should be there. In other words, 33 or more children out of each 100 in Los Angeles fail to reach the eighth grade. In San Francisco more than one half of the children fail to reach the eighth grade, and in the state of California more than 54 per cent of the children fail to finish the eighth grade.

THE HIGH SCHOOL STATISTICS.

Table III contains figures representing the numbers belonging in each grade in a given month, in the high schools of twenty-four California cities, also in a few cases the number of graduates is given. Table IV gives the enrollment of high school pupils in the various grades, the number of graduates in five counties of the state, and the number of graduates in the state of California for the academic year 1912-1913.

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Tables V and VI contain statistics of *enrollment* of pupils in the high schools of the same cities and counties in successive years, with this exception, the figures in the column marked "Grade 12" represent the *number belonging* in that grade in October or November, 1913. These tables were introduced in order to correct any error of comparison that might be due to recent growth in high school attendance. Barring mortality and complete disability, it would be possible theoretically to graduate this year just as many as entered the high schools four years ago.

In the cities receiving pupils into the high school in the middle of the year, the enrollment in the ninth year will contain more pupils than belong to that grade at any one time. The figures representing the *numbers belonging* to the different grades at a given time, are not subject to this inflation. The totals in Tables IV, V and VI are corrected by reducing the various total enrollments in the ninth grades so that they bear the same relation to the corresponding enrollments in the tenth grades as the total number belonging in the ninth grade bears to the total number belonging in the tenth grade in the twenty-four cities.

The same method of reduction can not be used in handling the high school statistics as was used in handling the elementary school statistics, because in this case the pupils that might, and really should be in school are not there. However, in this case, the use of the *number belonging* in the ninth grade as a basis of comparison, is not nearly so fallacious as would be the use of the *number belonging* in the first grade as a basis of comparison in the elementary school. The reason is this—that when a pupil fails to receive promotion in the high school, he usually leaves school, so that the number of hold-overs remaining in the ninth year of the high school is relatively quite small. Tables III A, IV A, V A and VI A have been reduced from Tables III, IV, V, and VI. All of the ninth grade figures have been reduced to a basis of 100 and the numbers in the other grades have been reduced to a relative basis. Consequently, the number entered under each grade against each city, county, or state, as the case may be, represents the percentage of the pupils that remained or passed up from the ninth grade. For instance, Table V A shows that on an average something more than 38 per cent of the pupils enrolled in the ninth grade in the twenty-four cities four years ago, were re-enrolled in the twelfth grade last year. Inversely, something less than sixty-two out of each hundred pupils entering the high school in these twenty-four cities in 1910-1911, failed to reach the twelfth grade. In considering these figures, it should be understood that in certain cities, notably San Francisco and Oakland, pupils are graduated in certain commercial courses at the end of the tenth grade, and in a few cases at the end of the ninth grade.

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The heavy broken line passing from the upper left to the lower right hand corner of each of the retardation charts is supposed to divide the over-age from the regular or under-age pupils. The figures above these lines are supposed to represent the regular or under-age pupils, and the figures below them are supposed to represent all of the over-age pupils.

The above interpretation, which is the usual one, is more liberal than the facts warrant. If a child enters school at six he should complete one year's work by the time he is seven, rather than by the time he is eight, and, barring accident, he should finish the eight grades by the time he is fourteen. A reference to the charts will disclose the fact that a large number of children do this. If, however, the charts were interpreted in this manner, the general showing would be quite different. It is true on the other hand that some children do not enter school until they are seven, but in cities this is the exception.

These figures show that if the efficiency of the present public school system is to be measured by its own standards of scholarship, it is then a failure *for many* of the children. That both the elementary and high schools have proved themselves successful in handling many of our children can not be disputed. However, their success is probably even less than indicated by the number of children who complete their courses of study. Many of the pupils who complete these courses do so merely because there is nothing else for them to do.

SCHOOLS—INSTITUTIONS OF SELECTION.

The high schools as at present organized are largely institutions for selecting and preparing those who will ultimately benefit by a later vocational course in a higher institution. Generally speaking, the only public educational institutions in the state that give efficient vocational courses are the universities, the normal schools, and certain colleges or technical schools. These schools train for the professions, for engineering, for agriculture and numerous other vocations, and the entire public school system is directed toward the selection and preparation of individuals for one or the other of these courses, though this is not the recognized purpose of the school system. The influence of these higher schools is felt in the elementary schools in standards of academic requirement, rather than in subjects. In the high schools, the influence is felt both in curriculum and in standards. The higher institutions are justified in requiring certain subjects in the public schools and in establishing and maintaining certain definite standards, but it is a mistake to apply this curriculum and these standards to the great mass of children who can not secure a higher education and who, consequently, can not benefit therefrom.

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The mere fact that each higher institution, secondary or collegiate, and each grade of the public schools has established more or less definite uniform standards of entrance, causes the institutions and teachers of a lower grade to establish minimum common standards of advancement which are almost entirely dominated by these higher classes and higher institutions, though usually without conscious intent upon their part. And these single standards for advancement are really the only efficient standards, because the standards that are usually set up for entrance upon a life work are so general and so indefinite that they can not be measured in terms of the usual school subjects. *It will be possible to establish definite standards of preparation for life other than those demanded by the collegiate institutions, only when an analysis of the demands of life is made and when definite vocational courses have been introduced into the curriculum of the public schools.* The placing of a definite standard of efficiency for entrance into each field of human endeavor is essential to efficient preparation for the same. This does not imply that there must be a minimum *common* standard of efficiency demanded upon the part of each pupil, but it does imply that each pupil shall give to his work of preparation the best that is in him.

So long as the schools fail to establish a wider variety of vocational courses with varying requirements for entrance, and so long as they maintain a single common standard of advancement for all pupils, most of the pupils will sooner or later be eliminated from the school without having completed any finishing course whatever.

Under our present system the tendency is to test children only for the purpose of determining those who are capable of doing creditably further scholastic work along the same lines. *Children should be examined not to determine this alone, but also to discover what they can best accomplish, to classify them and to fit them into the lines of work they are interested in and most capable of doing.* After having discovered what the child can do creditably, or, if he can not do anything well, what he can do best, we should accept from him the best that he can give and pass him along through the elementary school and into a vocational course. *It is inhuman to insist upon the child trying to do that which we know he will never succeed in doing.* We can never provide a universal education for our children until we drop the single institutional standard of advancement and establish individual standards. *The present standard, which groups the children into two classes, those who can, and those who can not, is undemocratic, unjust and inefficient.* It fails because it sets up as its only standard, for all children the securing of a scholastical education. It fails because it sets up as a further ideal, equality of accomplishment within this restricted field. *The children who can not be interested in these subjects, the children who have but slight ability in them, and the children who have a greater interest in the practical*

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affairs of life, usually fail of promotion and frequently become discouraged, lose confidence in themselves and leave school at the first opportunity. Also, many of the children who have unusual ability in these subjects, are satisfied to accept for themselves the minimum standard set by the school for the completion of the subject, and as a result are never taught to work up to capacity. On the other hand a considerable number of the children who barely pass, have been taught by the school to overestimate their abilities in these lines. *The whole system tends to destroy for the dull, the mediocre, and the bright, the opportunity to get a just estimate of their own weaknesses and strengths.* This false estimate or lack of knowledge concerning their own relative capacities, tends to render them helpless in selecting a suitable vocation when leaving school.

The machinery of the school with its standards has been inherited from the past, when universal education was a theory and when class education was the fact. In recent years the law has compelled all children under fifteen years of age, who have not completed the eighth grade, and all unemployed children under sixteen, to attend school. This in theory provides for universal elementary education, but the fact is that a large number of the children are not equipped by nature to do the work provided in the schools and consequently they can not survive in the struggle to pass the standards set for the various grades and for the various subjects in these grades. Many teachers and school officers, being more interested in children than in maintaining the institutional standards, have yielded to the need of the situation, have to some extent ignored the static standard, and have permitted pupils to advance, who, under a strict interpretation of the requirements of the system, would have failed of advancement. However, the system maintains intact its more or less fictional minimum common standards of advancement which always work to the disadvantage of a large number of the children.

The addition of courses in the more common vocational arts will permit of a segregation of pupils which will aid in the solution of the problem, *but universal opportunity can never be provided by the public school so long as it requires of all individuals a minimum common standard of efficiency in all courses.* Such procedure will always prohibit many children from advancing into the vocational courses which should be pursued by the pupil *only at the extreme end* of his school course, and, if a minimum common standard is maintained in these vocational courses, a certain proportion of the children will always fail of progress. Thus they will not only be prohibited from accomplishing in the school even the little which they would be capable of accomplishing were they allowed to try the work provided, but they will in many cases become discouraged and leave school earlier than necessary.

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Without question, specific minimum standards of efficiency are essential in the professions, because these are social service occupations, but no such requirements are necessary in the common occupations of life. The elimination of the common minimum standard does not mean the elimination of all standards. Standards are ideals for accomplishment and are essential to all progress, but we can not set a definite standard of accomplishment for all people and try to hurdle them over without placing on some the stigma of complete failure.

The adoption of an individual standard of advancement for pupils does not necessarily imply individual instruction, nor does it imply that there shall be no system, but it does imply that a worn out regulation of the system shall not be considered of more importance than the good of the child. It implies that there shall be a new system evolved to meet the new situation resulting from the fact that the school of today has to deal with *all of the children* with their great range of abilities and opportunities, rather than as in the past with *a select few of them.*

CAUSES OF FAILURES.

Children fail in their school work, as a rule, not because they are incompetent, but because *they have no adequate motive for doing the work,* and generally those who leave school without finishing, do so either because they have failed to pass, or because the work of the world seems more attractive to them than the work of the school. The lack of interest in school work is usually due to the failure of the child to connect it up in his mind with life. Only the child with a faith great enough to cause him to accept the word of the parent, the teacher, or the friend, that the school really does connect up with life, will put forth sufficient effort to do the work satisfactorily.

The normal child is naturally interested in adult life and occupation. The boy longs for manhood, when he can work, and earn and have money. Likewise, the girl longs for womanhood with all of its obligations of wifehood and motherhood. These are normal, natural ideals, but the schools of the past have not encouraged them. They have inherited their ideals as well as their courses of study and their standards. The subjects pursued in the school of the past have been inherited from the days of class rule and class education. They were originally intended to prepare for leadership. And so the principal ideal instilled in the minds of the young by the school has been that of leadership. We have directed both our studies and our ideals to the sole end of producing intellectual, political, or industrial leaders. The ideal of making the living with the mind rather than with the hands, or with the hands and mind, is emphasized. *The entire educational system tends to start all for the same goal, a goal that only a few can reach.* All are groomed for the same race and those that drop out enter life with little

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or no preparation, frequently with the wrong ideals and with a lack of confidence in their own abilities.

The school as an institution has upon the whole directed the attention of the children away from the practical affairs of life. They are required to give their attention to the subjects of the school, to the exclusion of the outside world. In many cases children have been taught that the desire to earn and possess money is a manifestation of a low ideal. The idea is suggested that education is above the common affairs of life. However, the common affairs of life interest many children more than the uncommon affairs of school life, and at the first opportunity they escape to the outside world. If we wish to reach these children and hold them in school and give each of them as much of a mastery of the school subjects as is possible, we shall have to greatly modify the system.

CHANGES NEEDED.

First.—We shall have to connect the school and the subjects of the school so closely with life that even the child may see clearly the relationship thereto. This may be done only by introducing and maintaining in the schools specific and clearly defined preparatory and vocational courses. And these courses, to serve the purpose, *will have to be introduced far enough down in the grades to attract the attention of the thousands of children who are leaving the elementary schools with a sixth or seventh grade education.*

Second.—We shall have to provide for the motivation of the work, by directing the minds of the children toward the practical affairs of life, instead of, as at present, away from them. This can be accomplished only by having each one at all times direct his school work toward the preparation for a specific vocation. This should apply to those who are planning to secure a higher education as well as to those who are planning to finish earlier in the course.

Third.—We shall have to shift pupils into such courses and such subjects as their native capacities, their economic conditions, and the economic demands may warrant.

Fourth.—We shall have to advance practically all of the pupils with their classes, giving them their true standing in each subject and sending with them a true written record of such standing, whether it be a record of 20 per cent or 95 per cent; we shall have to allow such pupils as have completed the elementary school, whatever their record may be, to enter the high school, provided that there is any course given therein from which they may secure an adequate return; and we shall have to promote pupils into courses rather than into schools.

Fifth.—We shall have to provide that the repetition of subjects by pupils shall be the exception, and that it shall be tolerated *only* when

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it is clear that the pupil will be more benefited thereby than he would be by advancing.

Sixth.—When it is clearly evident that a pupil can not master a subject, or that such mastery will require more time than the subject is worth to him, we should advise him to drop it and take up something that he can do better.

Seventh.—We shall have to provide ungraded classes or classes for individual instruction in order that such pupils as are weak in the essentials but who have attained power by maturing, may have opportunity to make them up.

Eighth.—We shall have to introduce the task system in teaching the vocational as well as many of the other subjects of the school, because it is the only method that will permit of adequate growth upon the part of the individual.

Ninth.—We shall have to place the entire scholastic record of the pupil upon his diploma so that he may at an early age appreciate the fact *that he has to stand upon his own record* and that in a democracy men are rated as individuals rather than as classes.

WHY SUCH CHANGES ARE NECESSARY.

First.—We wish every child in the commonwealth to have the opportunity to secure such training in the school as will fit him to do as well as possible that work in the world which he is, by nature and economic opportunity, best fitted to do. This can be brought about only when we provide that every child who leaves school shall have his eight or more years of schooling pointed with two or more years of vocational training, even though he may have to leave the school relatively deficient in some other branches of instruction.

Second.—We wish each child to remain in school as long as his financial condition will permit.

Third.—We wish him while there to associate with children of his own age rather than with the younger children, with his peers or his superiors, rather than with his intellectual inferiors.

Fourth.—We do not wish to destroy all motive and all ambition to advance by classifying the child as a failure.

Fifth.—We wish each child to advance, because no amount of repetition ever made a dull pupil brighter. Usually the more a child repeats the duller he gets, and he usually leaves the school with little or nothing to show for his years of effort. There is no subject in the school so important or so essential to the child that we can ignore time and effort upon his part for its accomplishment.

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Sixth.—We wish to have pupils instructed rather than to have subjects or classes taught and, above all, we want them instructed to do their part in the world's work.

Seventh.—We wish the recompense of pupils while in school to be equivalent to their real earning or their real product.

Eighth.—We wish the child to get his own measure, to the end that he may fit himself for the work that he can do best.

Ninth.—We do not wish any child to get the notion that he is a complete failure, when he is merely slow to acquire the formal things in education. Success in life is a relative matter, and the school should be administered in such a manner as to recognize relative success in the acquirement of its work.

Tenth.—We wish the bright pupils to work up to capacity instead of being satisfied to acquire a standard set by and for the average pupils.

Eleventh.—We want the pupils who are advanced and who graduate, to know at all times their exact rating in each subject, whether that rating be high or low.

FAILURE NOT ENTIRELY MEASURED BY LACK OF PROMOTION.

As suggested elsewhere, the failure of pupils to win promotion and the elimination of pupils from the grades do not fully measure the failure of the public schools to adequately prepare all of the youth for life's work. With few exceptions, those who complete the high schools and do not secure the special vocational training provided by higher institutions, are not as well prepared as they should be to enter any of the usual vocations. The same is true of those who complete their education in the elementary school. These two groups taken together composed more than 86 per cent of those who theoretically might have completed the high school last year.

The preparatory work is quite well done in the high schools, but poorly done in the last two years of the elementary school. This is due to the fact that in these grades an attempt is being made to put all children through exactly the same mill which, theoretically, is designed to prepare the children for *life,* and for the *high school,* at one and the same time.

The great need for the seventh and eighth grades is the segregation of the pupils according to their various abilities, their various interests, and their various financial situations; the provision of proper vocational courses for those who will end their school training with the completion of the elementary school; the provision of preparatory courses for those who can postpone their vocational courses until later in the public school course, and the provision of other courses for those who expect ultimately to enter higher institutions of learning.

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In the high schools, the situation is in some measure similar. Many boys and girls who have no natural aptitude for the work leading to the higher institutions, are compelled to do this class of work or nothing. The inclusion of these individuals in the preparatory classes lowers the standard of work for the entire class. This group together with such others as do not desire a higher education, or can not afford one, should be provided with an opportunity for securing vocational training in the high school.

In the cities, where the segregation of the pupils of the seventh and eighth grades is possible, the provision of vocational courses is seriously handicapped *only* by shortage of money and difficulty in securing teachers who know their subjects. In rural communities, the only way that the children of the elementary schools can be given opportunity to get proper attention, is by making provision for them in the rural high schools. However, there would be slight gain in this at present, since almost the entire energy in these schools is directed toward the preparation of pupils for the higher institutions of learning.

There are many rural high schools in the state that send pupils to the university only occasionally, and yet each school is required by the present law to maintain at least one course that will prepare students for this institution. Consequently, since they are not financially able in many districts to provide more than one course, the pupils are compelled to take this work or none. It seems unreasonable that *eighty or ninety per cent* of the pupils of our rural high schools should be denied opportunity to prepare for life in order that *ten or twenty per cent* may be given opportunity to prepare for the university. Almost every rural high school in this state should provide first of all a thorough agricultural course for boys and a complete home-making course for girls.

These courses would naturally include many of the subjects required for entrance into the university, so that it would only be necessary for the exceptional pupils who might desire to attend the university to spend an extra year therein. Thus all of the other pupils would be relieved from the need of pursuing courses that for them lead nowhere. If a rural high school can have but two teachers, one of them should be a man with an agricultural training, and the other should be a woman who has had a thorough course in rural homemaking.

THE OUTPUT NOT COMPETENT.

Those who employ the output of the public school, particularly the merchants, complain that these young people are rarely competent in any of the branches of the elementary school and that generally speaking, they can not add, subtract, multiply or divide when they are first employed. It should be pointed out that these individuals are recruited largely from the failures in our elementary and high schools, but

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there is slight comfort in this since these same employers frequently point out that they establish private schools and in a few weeks at most remove the deficiencies, thus accomplishing that which the public schools have failed to accomplish. In some instances, the failure of these young people is due to the fact that they are out of practice and have forgotten, but this is merely evidence that the long training has not properly functioned. However, the reason that the private school of the employer succeeds where the public school fails, is largely to be found in the fact that in one case the recipient of the training is absolutely convinced of the need, while in the other, he is really not conscious of such need. In one instance, this training is considered a part of his real work; in the other, it is far removed from the world of real work. It has an economic value in one case, while it appears to have but a scholastic value in the other.

Only a limited number of the larger employers of the state maintain such schools. In consequence there are at present thousands of young people over the age of fifteen, some employed in blind alley occupations, and others apprenticed in the skilled occupations, who have no opportunity for further school training. All of these individuals are badly in need not only of vocational education proper, but also of continuation work in certain of the common school branches. These young people can be taken care of, only by the establishment of a statewide system of part-time vocational and continuation schools. And the work in the elementary and secondary schools of the state can be vitalized and caused to function for many of the pupils, only by introducing into these schools clearly defined vocational courses; by causing each child in the school to be constantly conscious of the vocation which he at that time expects to enter and by providing that he shall have at least two years of training in a suitable vocation before he leaves the school.

ATTITUDE OF THE PUBLIC TOWARD INTRODUCTION OF VOCATIONAL TRAINING.

Your Commissioner of Vocational Education has met and counselled with scores of school administrators, members of boards of education, superintendents, and principals, and has found that sentiment among these men and women is almost unanimously favorable to the introduction of vocational courses in the public schools of the state. The only reason that such courses are not already common in the schools of the state is the inability of the local communities to finance them.

The great need of vocational education to complete and round out our public school system has also been proclaimed before thousands of teachers in the state, and in every instance the response has been instantaneous and favorable.

So far as can be ascertained, the general public is almost universally favorable to any movement that will make the schools more efficient in

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preparing for the common affairs of life. This is particularly true of both employers and experienced employees.

One of the greatest difficulties confronting the future development of vocational education is that of the false ideals of life and success held by parents and teachers. The individual, as employer, sees the need of vocational education and recognizes individual differences, but he does not always recognize such differences in his own children. He frequently tries to make leaders of them when they have no natural qualifications for such leadership. In the same manner, the working man tends to hold as an ideal for his children, a professional life, and not being in a position to see their lack of fitness for such, he frequently insists upon their taking the university preparatory course. This latter situation is particularly obnoxious and destructive when accompanied by the idea of making a living without working. It is difficult for parents to appreciate the fact that heredity, in its operation, respects neither their feelings nor their desires in this matter. The child of the professional man may be and frequently is cut out for an industrial pursuit. On the other hand, the child of the mechanic or tradesman may be naturally equipped for leadership. As a matter of fact, it is not uncommon for all of the children in a family to differ in natural traits and in interests.

THE MINIMUM WAGE.

The adoption of a minimum wage scale will ultimately decrease the demand for unskilled labor and will consequently tend to advance the age at which work may be obtained by our boys and girls. This will, in turn, leave three alternatives for the youth of our large cities: (*a*) to accept work for a certain time in blind alley occupations; (*b*) to attend school longer or, (*c*) to loaf. Unless a great change is made in the curriculum and the standards of advancement in our schools, many of them will pursue the latter course. When the time comes that the employer can demand upon the part of the new employee a certain degree of efficiency, it will also become absolutely necessary to provide compulsory continuation schools for those of our children who are stranded in blind alley occupations. Otherwise, there will be no opportunity for them to get a fair start in life.

In addition, it would seem that the just and natural corollary of a compulsory minimum wage will be the assurance of a certain amount of efficiency upon the part of the future employee.

THE STATE AND VOCATIONAL EDUCATION.

The policy of the state in regard to general education was definitely settled at its inception and it has assumed a constantly increasing share of the burden of providing an adequate education for all of its children. Though the welfare of the individual in the state is always placed

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second to the welfare of the state, his welfare and that of the state usually coincide, and so it proves in this case. Heretofore, this discussion has been confined to a consideration of vocational education from the standpoint of the good of the individual. The matter will now be considered briefly from the standpoint of the state.

It is presumed that the state is, above all, interested in making of its children good citizens. To express all that this term means would be difficult, but it certainly includes the following: efficiency in production, efficiency in control, and efficiency in the occupation of leisure time. Perhaps the above arrangement represents better than any other the order of their relative importance in so far as the relation of the individual to established society is concerned. If this were to prove true, it would be an interesting commentary upon the education of the recent past, and in fact upon much of the education of the present, since this education tends to reverse such order. The term production is here used in its broadest sense, including not only material things, but also the product of trade, transportation, etc. It is supposed to include that product which the individual contributes to society through his occupation.

In the past the school has placed most emphasis upon general appreciation. Thus it has confined itself almost entirely to training for consumption, and it has proved particularly efficient in preparing for the consumption of leisure time, which has for many individuals never materialized. In general, education for production has had little recognition below the university, and it is only in recent years that it has become prominent in that institution.

Efficiency in production insures to the state, first, that the individual shall be self-supporting and therefore not a burden upon society; second, that he shall add the maximum amount of his very best product to the total product of the commonwealth. Since not only the prosperity but the very existence of the state depends upon its products, it would seem that it could not afford to neglect to educate its producers in the art of production.

DRAWING IN THE SCHOOLS.

In the elementary schools drawing is one of the subjects required by law, and undoubtedly it is taught in some manner in practically all of them. Courses in freehand drawing are given in fifty-seven per cent of the high schools of the state, and fifty-one per cent of them also give courses in mechanical drawing.

Without doubt, drawing was originally given its place in the curriculum of the public schools upon the representation of its practical value—and those who were responsible for having it included in the group of required subjects for the elementary schools of this state, probably had the same thing in mind. It was not long, however,

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until this purpose was pretty generally lost sight of and the subject was pursued either as a culture, as a discipline, or as an instrument to cultivate the so-called general powers of observation. The spirit of scholasticism and the fine art ideal were so powerful that the vocational ideal could get no foothold. This result came about more easily because of the fact that strictly speaking, there really is no vocation of drawing. Drawing is a means of expression essential to many vocations, ranging from fine art to the most prosaic of occupations. Strictly speaking, it exists as a vocation only for the teacher. Because it was a subject in the school, it was pursued not for its usefulness in the occupations of life, but rather as an end in itself. It has become almost purely a subject for appreciation and consequently a preparation for consumption rather than for production. There is, however, at the present time, a powerful movement on foot to vocationalize it, but this can be successful only when the course completely yields itself to the needs of the real vocational subjects of the curriculum.

MANUAL TRAINING IN THE SCHOOLS.

Like the drawing, the manual training which is to be found in the schools of most of the cities of this state, came into the curriculum as a vocational subject, but here again the spirit of the school devocationalized it until in some cases it is as impractical and as scholastic both in content and in process as any of the other subjects of the curriculum.

In establishing the manual courses, little attention has been given to the vocational situation or need in the local communities. The usual method has been to find out what equipment was possessed and what course was given in some school of similar grade elsewhere and then appropriate and put into practice both ideas. Thus we find laboratories containing rows of lathes and other machinery-manufacturing equipment located in cities without an iron working shop. But here again a change is coming and school authorities are now trying to adapt these courses to the local needs.

One of the reasons that the manual training courses both in elementary and high schools have yielded so readily to the scholastic spirit, has been that they have attempted to give *general* vocational knowledge that presumably includes the common elements of many crafts, or they have attempted to give so-called general hand training or hand skill courses. This procedure tends to shift the attention directly away from the practical situations and the practical applications in life, and tends on the other hand to center the minds of pupils and teachers upon generalizations.

As shown by this experience, a school subject occupying such a position has little chance of defending itself against the spirit of traditional scholasticism that naturally dominates the school.

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At first glance, one is inclined to the view that the manual courses in many of our modern high schools are practical vocational courses. And judging from the content of these courses and the practical manner in which they are handled, they are. However, the students who take advantage of them rarely, if ever, enter the vocations they represent. As a rule they are used as a preparation to the engineering departments of the university.

Molders, blacksmiths, tinners, plumbers, etc., are not recruited from the high schools. They are recruited from the elementary schools, and usually the boys who will ultimately take up these trades can not enter our high schools under the present scholarship restrictions upon matriculation. If we wish to teach these subjects as vocations, we shall have to do so in the grammar grades of the elementary school, and we shall have to admit boys to these courses upon age rather than upon scholastic qualifications.

The present manual training and manual arts courses in both the elementary and the secondary schools are serving a good purpose. In fact, they have in our urban communities become an essential part of our general educational system. Occupying as they do, a place in the preparation of the pupils for all future vocational courses, and being general in character, they may be made a means to the proper exposure of the children to the vocations of the community and may thus perform invaluable service in aiding in the guidance of the youth in selecting suitable future occupations. However, the fact remains that they are very rarely, if ever, real vocational courses. Such courses to be vocational must be specific rather than general in character; they must prepare for occupations that exist within reach of the pupils, and they must be pursued by the children for the purpose of preparing for actual and definite vocations.

DOMESTIC SCIENCE AND DOMESTIC ART.

In general the work in the domestic arts is much more practical than that in the manual arts. This is not necessarily due to teachers or teaching, but to the character of the domestic arts themselves. It is much simpler and easier to duplicate in the school the indoor occupations of the home, than it is to duplicate those of the outside commercial, industrial, or agricultural world. In fact, only ignorance, or inexperience, or pedagogical theory could make a cooking or a sewing course entirely impractical and useless. While in certain places these courses sometimes run to fancy work in both cooking and sewing, in general they are rapidly tending to become more practical both in content and in process. Perhaps the reason they receive some criticism because of impracticability, is that the teachers, not being practical housekeepers themselves, are not always in a position to see the practical needs of

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the situation. Emphasis upon the practical experience end of the teacher's training would, in the future, tend to materially strengthen these courses.

One of the great needs of the situation is that this line of work shall be expanded into real homemaking and housekeeping courses; that sewing shall be the making and repairing of the clothing of children, as well as those of adults; that cooking shall include a study of the feeding of infants and the ill and that courses shall be added in home accounting, in home sanitation, home building, home furnishing, home gardening, and home keeping with all that these imply.

Another matter of great importance is that these courses in homemaking and home management shall be made available to the children of the elementary schools who never enter the high schools.

One thing that has tended to make both the manual and domestic courses more or less inefficient, has been the lack of time devoted to them, and this is particularly true of the work in the elementary grades where the usual time is about 90 minutes per week. The homemaking courses should be expanded, ample time should be given the individual pupils for their accomplishment, and every girl should secure a thorough course therein before she leaves the school.

VOCATIONAL COURSES GIVEN.

During the last three or four years, a remarkable change has been coming about in the secondary schools of California. Fifty-six real vocational courses other than the homemaking courses, have found their way into the curriculum. To be sure, many of these courses are offered only in one or two high schools in the state, but the diversity of courses introduced into these schools by the different local communities will serve the important function of establishing experience in these various fields that will be of great value in the future. A list of these subjects with the number of schools giving instruction in them follows:

Animal Husbandry	1	Navigation	1
Architectural Drawing	25	Nursing	7
Architecture	7	Pattern Making	20
Assaying	1	Photography	1
Automobile Engineering	1	Pottery	1
Automobile Repairing	5	Printing	4
Domestic Service	3	Retail Salesmanship	2
Drafting	12	Stock Business	6
Blacksmithing	5	Telegraphy	1
Bookbinding	6	Viticulture	2
Horticulture	10	Dressmaking	22
Laundering	5	Electrical Wiring	3
Library	1	Farm Architecture	1
Machine Design	3	Farm Management	5
Market Gardening	7	Banking	10
Millinery	18	Bee Business	1
Molding	7	Farm Mechanics	4
Naval Architecture	1	Furniture Construction	16

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Boat Building	1	Teaching	1
General Farming	30	Painting and Tinting	1
Bookkeeping	162	Office Practice	3
Brickwork	1	Pipe Fitting	2
Carpentry	21	Poultry Business	3
Care of Children	1	Restaurant Cooking	1
Cementwork	7	Shorthand	159
Chamber of Commerce Work	1	Tailoring	4
Confection of Candies	6	Typing	104
Dairying	7	Waiting on Tables	8

Under the general caption "Homemaking or Housewifery," the following courses are given in the number of schools indicated:

Care of Children	1	Home Accounting	9
Care of Sick	4	Home Economy	10
Cooking	179	Home Gardening	10
Dressmaking and Millinery	1	Home Laundering	3
Feeding of Children	2	Home Sanitation	1
House Construction	1	House Decoration	14
House Furnishing	10	House Planning	9
Household Management	1	Household Mechanics	1
Textiles	14	Sewing	190

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RECOMMENDATIONS.

In view of the foregoing considerations, your Commissioner of Vocational Education recommends the following:

I.

That legal provision be made for the establishment and maintenance by local boards of education, of vocational schools, departments, or classes in their respective districts; that provision be made that these schools, departments, or classes may be established and maintained for the purpose of giving well organized, definite instruction in one or more of the vocations common to the local community, in any two or more consecutive grades of said school from the seventh to the fourteenth, inclusive and that for the purposes of this act, homemaking and homekeeping and all non-professional money-producing occupations shall be considered vocational subjects.

REMARKS.—It is essential that the vocational subjects shall be introduced as far down as the seventh grade;

(*a*) Because at least one half of our children leave school at or before the age of fifteen, so that a half of the homemakers and a large proportion of the skilled workmen are recruited from the elementary school.

(*b*) Because the selection of a vocation at an early age will motivate the school work for many boys and girls who, under the present system, fail because they can not see the relation of the school's work to the world's work.

The situation could also be met by introducing these subjects in the high school alone, provided that an age rather than a scholastic requirement should be placed upon entrance into such courses in said high school.

II.

That legal provision be made for the optional organization and maintenance of intermediate schools consisting of grades 7, 8, and 9, or grades 7, 8, 9, and 10, in all districts that maintain both elementary and high schools under the management of a common board of education.

REMARKS.—*First*, the segregation of the pupils and the establishment of departmental work is necessary in order to provide special instruction in the vocations and in the high school preparatory subjects; *second*, the incorporation of certain of the high school grades in these schools is essential because, with the introduction of vocational courses and the consequent advancement of pupils into these courses, a large number of the children will have completed nine years' work by the

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time they have reached the age of fifteen; *third,* it is constantly becoming more difficult for children to secure employment under the age of sixteen, consequently, a number of the vocational courses started lower down should be extended through the tenth year; *fourth,* the increasing of the size of the school by the incorporation of one or two of the high school grades with the seventh and eighth grades, will decrease the range of subjects taught by each teacher and make it possible to increase the numbers of different vocational courses: *fifth,* the legalizing of such schools will make it possible to provide for an intermediate teacher's certificate, a very desirable end, if we are to succeed in finding a sufficient number of competent teachers of the vocational subjects in these grades.

III.

That legal provision be made for the establishment and maintenance by local boards of education of intermediate and secondary day, part time day, and evening vocational schools, departments, or classes; that provision be made, at the option of local boards of education, that all of the youth under eighteen years of age who reside in such districts as maintain suitable day schools, departments, or classes of this character, and who are not at the time in attendance upon a regular day school, shall be compelled to attend such part time schools, departments, or classes for a period of not less than four hours per week, or eight hours in each two week period; also, that provision be made that for the purpose of carrying out the provisions of this act, the part time school day may include two sessions, one extending from 8 a. m. to 12 m., and another extending from 1 to 5 p. m.; to further provide that no individual shall be compelled to attend such part time school on Saturday afternoon and that the evening schools shall not remain in session more than three hours nor later than 10 p. m.

REMARKS.—As suggested in the preceding general discussion, the larger proportion of our boys and girls between the ages of fifteen and eighteen are not in attendance upon any school whatever. Some of them are already apprenticed in skilled occupations, some are employed in blind alley occupations, and others are loafing, largely because their productive ability is too small to attract employers. All of these individuals are badly in need of vocational guidance, of vocational training and training in citizenship; and some of them, particularly the children of foreign parentage, need further training in the common school branches. All, or nearly all of the girls need training in home making; and those girls and boys who are already apprenticed in skilled vocations need help on the theoretical side of their occupations; while the others who are employed in the blind alley occupations, or who have

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no steady employment, need guidance and practical training in suitable vocations.

Of those who are past the age of eighteen, many can doubtless arrange to attend the part time day continuation and vocational schools, departments, or classes, especially if they provide a Saturday afternoon session, but any who can not find time to attend these day courses should be provided for in the evening sessions.

The establishing of the particular courses in these schools should pend the desires and needs of the pupils. The pupils should, as far as possible, be handled as individuals and each should pursue his own task and should be advanced in his work as rapidly as possible. For the foreign immigrant children, the most essential work might be found in a study of the language, and the laws and the customs of the country, while for the product of our own elementary school, it might be found in the special mathematics, the special drawing or the special language essential to advancement in the chosen vocation, or for certain others of these it might be found in a shop or laboratory course preparing them for apprenticeship in some skilled occupation or in certain cases, preparing them for a change from one skilled occupation to another.

In short, these institutions should be established and maintained to take care of the most pressing needs of those who can not afford attendance upon the regular day schools. The curriculum should be moulded largely after the desires of the pupils, with this exception, that all girls between fifteen and eighteen should be urged to devote at least two hours per week to the pursuit of the homemaking course.

IV.

That legal provision be made for the establishment and maintenance by local boards of education, of extension work in citizenship, in housewifery, in agriculture and in other vocational subjects.

REMARKS.—Extension work in housewifery and in citizenship is clearly needed in handling the immigrant population in certain of our cities. The foreigner is often suspicious of the school and can be reached only through the indirect method of approach. Again, the problem here is largely of an individual nature and can be met adequately only by getting into personal touch with the home lives of these peoples. The extension teachers in this subject can also act as advance agents for the part time continuation and vocational schools.

Under this provision the instructor in agriculture in a county or union high school could give his service to the various communities within his district either as instructor or as counsellor. The use of the teacher of agriculture in this manner would also serve to acquaint him with the agricultural conditions and needs of the district.

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Again, it might be an economy and an educational advantage for the courses in such subjects as salesmanship to be conducted in department stores or other places of employment.

V.

That legal provision be made through the state department of education for the establishment and maintenance of classes in the English language, in citizenship, and in such other subjects as may be deemed advisable, for the education of such foreigners as may be attached to wandering or transient laboring camps.

VI.

That section 1772 of the Political Code referring to special certification be repealed; that legal provision be made for the granting of special certificates by county boards of education upon credentials only; that legal provision be made whereby it shall be the duty of the State Board of Education:

1. To prescribe by general rules and regulations the credentials upon which the various county boards of education may grant certificates to teach any of the special subjects in the elementary, the intermediate or the secondary schools of the state.

2. To issue to individuals, under such regulations as it may see fit to adopt, credentials in any special subject or subjects upon which county boards of education may grant special certificates of a like type and of a like grade, in the subject or subjects listed therein.

3. To issue to individuals, under such regulations as it may see fit to adopt, temporary or permanent certificates to teach the various academic, vocational and professional subjects in the part time vocational normal schools of the state, and to keep on hand for the use of local educational authorities an available list of such teachers.

REMARKS.—The situation demands that provision shall be made for four general types of special certificates as follows:

(*a*) Elementary, intermediate and secondary manual, household, fine, and physical arts certificates.

(*b*) Temporary intermediate and secondary vocational arts certificates.

(*c*) Permanent intermediate and secondary vocational arts certificates.

(*d*) Secondary technical arts certificates.

An investigation of the regulations under which county boards of education are at present granting certificates in the special subjects, reveals the fact that they are granted almost entirely upon credentials. Also, that while the standards established by many of these boards are about equivalent to those which should be prescribed for the inter-

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mediate manual, domestic, fine, and physical arts certificates, there is as a rule no distinction made between the requirements for the elementary and the secondary certificates.

The paragraph under section 1772 of the Political Code, which governs the granting of all special certificates, was enacted at a time when it was difficult to secure teachers of the special subjects mentioned above, who possessed any definite academic, special, and professional training. At the present time well trained teachers of the manual, domestic, fine, and physical arts may be readily obtained. On the other hand teachers of the vocational arts who are efficient in their special lines and who in addition possess the above academic and professional training, do not exist in sufficient numbers to supply the demand even at the present time.

This condition has placed county boards of education in a position where it is necessary either to refuse certification to those who are efficient in the special vocations but who lack the higher academic qualifications, or break down all of their standards governing the certification of teachers in such special subjects as are thoroughly established and provided with competent, well trained teachers.

The vocational arts demand teachers who have had experience in the vocations to be taught. It is desirable to secure as much additional training, scholastic and professional, as possible, but at the present time and for some time to come, the combination of the two can not be secured. Any attempt to have scholastically trained teachers who have had no real experience in the vocations teach these subjects, will prove a failure. The powerful traditional influence of the school and the teacher will, within a very short time, absorb and work over all such attempted practical courses into so-called disciplinary and cultural courses, and we will have as a result merely other new forms of manual training.

On the other hand, school trained teachers are available and they are much more efficient in the manual, domestic, fine, and physical arts than would be the business, or industrially trained teachers who have had no adequate school training.

The technical arts certificate is designed to provide college or university trained teachers for the technical subjects in high schools. In many of those subjects the college trained teachers are more efficient than the experience trained teachers who have had no such college training. However, it might be well to provide in the future that all such college trained teachers should also have some experience in the industrial world.

It is necessary that the power regulating the conditions under which special certificates may be granted, shall be centralized in order that greater uniformity may be secured throughout the various counties of

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the state. It is, however, also necessary that some responsible body shall be given full authority to modify these regulations from time to time in order that the academic requirements for the vocational arts certificates may be placed as high as possible, but at the same time, not so high but that a sufficient number of men and women, efficient in the various vocations, may be secured to do the necessary teaching. Also, it is clearly evident that a much higher academic requirement may be established for certification in some vocations than in others. These considerations taken together make it essential to have a pliable system for the control of special certification.

It is also important that the authority to investigate the claim of the fitness of certain individuals who can not qualify to teach these special subjects under the general regulations, shall be placed in the hands of some one responsible body. Sometimes it would prove an advantage to the county boards of education if the special cases could be handled by a body not subject to local pressure. In fact, most of the county boards of education have already fenced themselves in by establishing general regulations to govern all cases. This is indeed unfortunate, since, in the fine arts especially, many of the most competent teachers have had but a relatively small amount of school training.

The establishment of vocational certificates will bring about another complication. Many able manual training teachers may wish to qualify as vocational teachers; also, certain domestic arts teachers may wish to qualify as vocational arts teachers. It is evident that to require of these individuals five or seven years in the vocation, as the case may be, would merely result in barring them from the field. An experienced manual training teacher of university caliber would often get more in two years' experience in a vocation than certain other men would get in a lifetime. In the same manner a school trained teacher of sewing would frequently be able to qualify in the vocational aspects of the subject in a much shorter time than would a previously untrained woman.

Again, it is barely possible that certain practical housekeepers who are mothers could qualify to teach homemaking to our girls without having either the full academic or the full special and professional courses suggested in the code.

VII.

That legal provision be made whereby any teacher who devotes as much as one half of his or her teaching time to the teaching of a special subject, or who receives the salary of a special teacher, or who is in any other manner classed as a special teacher, must hold a special certificate in said special subject.

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VIII.

That legal provision be made:

First.—To provide for extending state aid under the conditions hereinafter set forth to all such elementary and high school districts as establish and maintain vocational schools, departments, or classes conducted (*a*) as a part of the regular day schools, (*b*) as part time day vocational schools, departments, or classes, (*c*) as evening vocational schools, departments, or classes, or (*d*) as extension vocational courses, in any of the grades of the public schools above the seventh grade and inclusive of the same.

Second.—To provide that no school district shall receive aid from the state under this act on account of any such vocational school, department, or class, unless the same shall have been accredited by the State Board of Education, and to provide further that the State Board of Education in order to carry out the purposes of this act, shall be authorized to make such general rules and regulations as it may see fit for the establishment, maintenance, organization of curriculum, and management of all vocational schools, departments, or classes, on account of which local boards of education expect to benefit by the provisions of this act, except as hereinafter provided.

It should be made the duty of the State Board of Education to inspect the vocational schools receiving state aid, this work to be done by the Commissioner of Vocational Education and by such other experts as may be secured by the board. The State Board of Education, moreover, should be given the power to cancel the accreditation and direct the withholding of state aid in the case of schools which, on inspection and after reasonable notice, fail to maintain the standard of work on which their accreditation was based.

Third.—To provide; (*a*) that state aid may be extended on account of a vocational course in a regular day school only when it is planned to occupy as a minimum 150 minutes per day for a period of two school years or an equivalent; provided, however, that the State Board of Education shall adopt special or general regulations governing the subjects that may be included in any given course; (*b*) that state aid may not be given on account of a commercial course including as its major vocational subjects, typing, stenography or shorthand, and bookkeeping.

Fourth.—To provide that any school district in order to have a vocational course accredited, must, upon its organization or immediately after this act goes into effect, apply to the State Board of Education for such accreditation, at the same time submitting to that body a written statement including an outline of the proposed course or courses, the approximate number of pupils of each grade expected in the same, the

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anticipated teaching force, and any other information required by said board.

Fifth.—To provide that there shall be apportioned to each district maintaining vocational schools, departments, or classes, in addition to other state aid apportioned, either on the account of the high or the elementary schools, the sum of 40 cents per hour for the aggregate hours of actual instruction (including vocational guidance) or supervision given by each properly certificated teacher in accredited vocational subjects. To further provide, that no district shall receive on account of any teacher the special aid contemplated under this act either in an amount in excess of $500 annually or in an amount in excess of one third of the amount actually paid to such teacher for the service upon which such state aid is requested.

Sixth.—To provide that nothing in this act shall be construed in such a manner as to prohibit pupils, at the option of the vocational teacher, from doing a part or all of their shop or other practical field work under the supervision of such teacher, in the shops, fields, or places of business of their parents or guardians or under employment in the shops, fields, or places of business of others.

Seventh.—To provide for the appointment, by such local boards of education as are maintaining vocational schools, departments, or classes, of one or more local lay advisory boards, as provided for under general regulations to be established by the State Board of Education; further, to provide, that the membership of these boards shall consist, where possible, of employees and employers, that the members shall serve without pay, that they shall visit and inspect the classes pursuing the vocational courses they represent in their respective districts, that they shall counsel and advise with the local boards of education upon the problem of making the course or courses they represent as practical as possible, and that they shall act with the representative of the State Board of Education and shall assist him in his inspection of the instruction and management of these schools, departments, or classes.

REMARKS.—There are several important reasons why the state should aid vocational education. The first is that in modern industry and particularly certain of the trades such as the building trades, the demand for workmen is not constant in any given locality, thus necessitating their shifting from place to place. The second is that it is exceedingly important to the state that its workers be trained to the maximum of efficiency in the lines in which they are by nature best fitted to contribute to society their product. The third is that the state of California already acts upon the assumption that public education is largely a function of the state. And since the projected vocational education will by its very nature cost much more to admin-

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ister than the older types, and since the local communities are at the present time, at least in their own judgments, contributing to education all they can possibly afford, it will be necessary for the state to assume a part of the burden in order to stimulate the local communities to introduce the work.

The difficulties attendant upon making school instruction in the vocations practical, and in hindering the courses from becoming general educational, disciplinary, or cultural courses, make it exceedingly important that a strict supervision be exercised by the state authorities. Most of the attempts of the past to make the schools more practical by the introduction of vocational subjects have failed. The only subjects in which success has been even reasonably satisfactory are those subjects such as domestic science, domestic art, shorthand, typing, and bookkeeping, which are usually practiced under conditions quite similar to those prevailing in the schoolroom.

Many of the promoters of vocational training including certain of the leading educational experts of the country are of the opinion that a practical subject can not survive in the atmosphere of the traditional school. In fact, Wisconsin has set up an independent system of schools to teach the vocational subjects. It is, however, the opinion of the Commissioner of Industrial and Vocational Education that if the state will provide a sufficient amount of aid to command the respect of the local communities, and if it will lodge sufficient power in the hands of the State Board of Education to enable it to generally control the training and selection of teachers, and the construction of courses, and the supervision of instruction, these courses can be made just as practical as similar courses in independent schools.

It is suggested that shorthand, typing and bookkeeping shall for the present receive no state aid for the reason that they are at this time not only well established, but in all probability over-established. Statistics in this office show that in Oakland and San Francisco together, there were enrolled last year in the day high schools, 1,396 pupils in bookkeeping, 1,771 pupils in shorthand, and approximately 1,300 in typing.

The aggregate hours of instruction is selected as the basic of apportionment because this method will adjust itself automatically to recitations of different lengths, to part time day schools, and to evening schools; it will as readily adjust itself to a situation created where a teacher has to teach a vocational subject two or three hours per day and some other subject the remainder of the time and it will also permit of the employment of a vocational teacher for two or three hours a day, or for two or three days per week, or for any other broken or irregular period.

This method will work better than the aggregate attendance method in that it will aid all classes equally. This is highly desirable since a

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teacher may be able to handle efficiently forty pupils in certain vocational subjects and only fifteen or twenty in others, and since it is desirable that the vocational courses established shall not be too much influenced by cost of instruction.

The requirement on the part of the local community to spend two dollars from its regular school fund for every dollar received from the state, will insure that said community shall employ an efficient teacher and shall see that he is kept busy teaching classes of a respectable size.

The provision for local advisory boards composed as they will be of both employees and employers, will guarantee that the course shall have the support of both employers and employees and that the local boards of education shall in each case have the advantage of expert advice in each of the vocations taught.

IX.

That legal provision be made:

1. To provide for the establishment and management of evening state normal vocational schools, or classes, by such local city boards of education or state normal school boards as maintain evening vocational schools suitable for use as training schools, and to provide that the purpose of these schools shall be to offer opportunity for properly qualified individuals employed in the various local occupations to prepare for teaching the same.

2. To provide by state appropriation for the entire expense of maintaining these schools except the expense of housing, heating, lighting and power which shall be provided by such local boards as establish them.

3. To provide that such local boards shall select the necessary teachers from a list submitted by the State Board of Education at such a schedule of salaries as may be set by said state board.

4. To provide that these schools or classes may be established by such local boards only after they have, upon their own motion, received permission to establish the same from the State Board of Education, and to provide that the State Board of Education may order the local board to discontinue such school, or class, when in its judgment, the demand for such school or class is not great enough to warrant its further maintenance.

5. To provide that the entrance requirements into each teacher's vocational course and the qualifications for graduation from such course shall be established from time to time by the State Board of Education, which body shall be authorized to issue to such graduate the State Board of Education special vocational arts credential; provided, that no student shall be admitted into any such school or class who has not had a minimum of five years practical experience in the

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vocation in which he desires to qualify as teacher, or who does not possess a teacher's certificate valid in California.

REMARKS.—It should be perfectly clear to all that vocational instruction, being more or less a new departure, has established neither the content of its various subjects nor an adequate method for their presentation. It would seem then that centralized institutions, such as these, given over to a study of the subject of instruction, could do a wonderful work in gathering the experiences of the most successful and passing them along to the beginners, or the less competent. Again, if we are to select our teachers from those experienced in the various vocations, we shall have to provide them an opportunity not only to prepare to teach but also, in certain cases, to acquire a knowledge of the essential common school branches which were neglected by them in their childhood and youth.

That these schools should be evening schools and located where needed, is evident, since it would be difficult to get the students either to give up their regular occupations or to leave home in order to prepare for the work.

X.

That legal provision be made authorizing the State Board of Education to require vocational surveys in such communities as are asking for or receiving state aid on account of vocational schools, departments, or classes.

REMARKS.—The need for such a survey is evident when we take into consideration the fact that we neither know the numbers employed in the various occupations, nor the particular grades in the schools from which they were recruited. The first piece of information is needed that we may not tend to overcrowd certain occupations, and the second is needed that we may place the vocational courses in such grades in our schools as will make them available to the children who will enter these vocations in the future.

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Digest of Laws of States that Provide State Aid for a More or Less State-wide System of Vocational Education.

Indiana.

1. *Units of organization* are cities, towns and townships.
2. *Types* are separate schools, regular day schools, part-time day, and evening schools or classes.
3. *Compulsory education* in part-time day, ages 14 to 16, 5 hours per week.
4. *Approved* by State Board of Education.
5. *Restricted* to such courses in part-time schools as are supplementary to regular employment.
6. *Established and maintained* by regular school authorities.
7. *Local Board of Inspection* is appointed by school board, ratified by State Board of Education. Three members suggested for each separate vocation taught.
8. *State reimburses* local communities maintaining regular day, part-time and evening vocational schools and classes to the extent of two thirds of net cost of maintenance less tuition collected.
9. *State reimburses* local communities to extent of one half of amount expended for tuition.
10. *Age limits* are for regular day and part-time day schools, 14 to 25.

Maine.

1. *State aids* elementary schools teaching manual training and domestic science, to the extent of two thirds of the teacher's salary, not to exceed $800 for each teacher.
2. *Approved* by Superintendent of Public Instruction.
3. *State aids* secondary schools providing instruction in agriculture, domestic science and mechanical arts, to the extent of two thirds of cost of instruction, but not to exceed $500 to any district for any one year.
4. *State aids* certain selected vocational schools teaching agriculture, domestic science, manual arts and the trades, to the extent of two thirds of the cost of instruction, but not exceeding $2,000 for any one district.

Massachusetts.

1. *Units of organization* are counties, cities and townships.
2. *Types* are regular day, part-time day, and evening schools or classes.
3. *Compulsory education* in part-time day, ages 14 to 16, 5 hours per week.
4. *Approved* by State Board of Education.
5. *Restricted* to such courses in part-time schools as are supplementary to regular employment. Exception: Vocational courses for women in evening classes do not have to be supplementary to regular employment.
6. *Established and maintained* by regular school authorities, or by *independent boards.*
7. *Local Board of Inspection* is appointed by school board, and ratified by State Board of Education. Three members suggested for each separate vocation taught.
8. *State reimburses* local communities maintaining regular day, part-time, and evening vocational schools and classes to the extent of: (*a*) One half net cost of maintenance less tuition collected; (*b*) two thirds net cost of maintenance for vocational courses in regular high schools maintaining agricultural courses.
9. *State reimburses* local communities to extent of one half of amount expended for tuition.
10. *Age limits* are for regular day and part-day schools, 14 to 25 years, for evening schools, 17 or over.

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New Jersey.

1. *Units of organization* are county, joint county, districts, or union of districts.
2. *Types* are regular day, part-time day, and evening schools or classes.
3. *Not compulsory.*
4. *Approved* by State Board of Education.
5. *Restricted* to such courses in part-time schools as are supplementary to regular employment. Exception: Vocational courses for women in evening classes do not have to be supplementary to regular employment.
6. *Established and maintained* by regular school authorities.
7. *No local boards of inspection.*
8. *State reimburses* local communities maintaining regular day, part-time, and evening vocational schools and classes to the extent of one half of net cost of maintenance but not to exceed $10,000 for any district, county or joint district.
9. *Tuition reimbursed* to local communities to extent of $25, through another act.
10. *No age limitation.*

New York.

1. *Units of organization* are cities and districts.
2. *Types* are regular day, part-time day, and evening schools or classes.
3. *Not compulsory.*
4. *Approved* by Commissioner of Education.
5. *Not restricted.* (See (5) other states.)
6. *Established and maintained* by regular school authorities.
7. *Local Boards of Inspection* are appointed by school board, and ratified by State Board of Education. Two members suggested for each separate vocation taught.
8. *State reimburses* local communities maintaining regular day, part-time and evening vocational schools and classes to the extent of: (*a*) one half of net cost first teacher not to exceed $1,000; (*b*) one third of salary of all additional teachers. Provision is made for a pro rata distribution of part-time teachers in evening part-time, or other schools.
9. *State reimburses* local communities through high school act for tuition expended.
10. *No age limitations.*
11. Minimum of 15 pupils required for formation of class.

Pennsylvania.

1. *Units of organization* are districts or joint districts.
2. *Types* are regular day, part-time day, and evening schools or classes.
3. *Not compulsory.*
4. *Approved* by State Board of Education.
5. *Restricted* to such courses in part-time schools as are supplementary to regular employment. Exception: Vocational courses for women in evening classes do not have to be supplementary to regular employment.
6. *Established and maintained* by regular school authorities.
7. *Local Board of Inspection* is appointed by school board and ratified by State Board of Education.
8. *State reimburses* local communities maintaining regular day, part-time, and evening vocational schools and classes to the extent of two thirds of cost of instruction not to exceed $5,000 in any one district for any one year.
9. *State reimburses* local communities for tuition to extent of $25 per child through other act.
10. *No age limitations.*

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Wisconsin.*

1. *Units of organization* are school districts.
2. *Types* are all day, part-day, and evening schools or classes.
3. *Compulsory education* in part-time day, ages 14 to 16, 5 hours per week.
4. *Approved* by the State Board of Industrial Education, consisting of 9 members, 3 employees, 3 employers, and 3 educators.
5. *All cities with 5,000 or more inhabitants* required to provide boards for industrial education—these boards to be appointed by the local boards of education and to consist of 6 members, 2 employees, 2 employers, the superintendent of schools and the high school principal.
6. *State aid provided* for four types, industrial, commercial, continuation and evening schools.
7. *State reimburses* local communities maintaining above types to the extent of one half expense of instruction up to $3,000 for each school maintaining all four types but not to exceed $10,000 to any one community.
8. *Employers must pay wages* to "permit pupils" for the five hours spent in continuation schools.

*The Wisconsin laws covering this topic were not available, so this digest was gleaned from various secondary sources.

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PART V.

STATISTICAL TABLES.

KINDERGARTEN SCHOOLS.

TABLE No. 1. Number of Counties Maintaining, Number of Teachers, Number of Pupils Enrolled, Attendance.

TABLE No. 2. Receipts, Expenditures, Valuation of Property, Average Salary of Teachers.

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KINDERGARTEN SCHOOLS.

TABLE No. 1.

Statistics of Kindergarten Schools, showing number of Teachers, Enrollment, Average Attendance, and Average Number of Days School was Maintained, by Counties.

Counties	Total number teachers employed (all women)		Enrollment				Average daily attendance		Average number of days school was maintained	
			1913		1914					
	1913	1914	Boys	Girls	Boys	Girls	1913	1914	1913	1914
Alameda	10	17	283	299	626	595	251	535	161	171
Fresno	2	2	55	70	58	64	64	61	181	195
Humboldt	-----	2	-----	-----	47	40	-----	40	-----	173
Los Angeles	249	269	3,925	3,798	4,224	4,227	4,284	4,836	175	177
Orange	4	5	105	130	124	152	112	153	171	171
Riverside	4	6	84	86	103	101	91	104	174	180
Sacramento	24	27	377	362	418	495	294	377	183	179
San Bernardino	6	5	80	83	82	84	94	105	180	180
San Diego	6	7	410	405	452	406	305	354	183	190
San Francisco	1	4	25	41	155	150	29	149	174	179
Santa Barbara	8	8	123	135	175	154	126	148	200	200
Tehama	1	-----	24	12	-----	-----	19	-----	160	-----
Ventura	1	2	19	18	51	44	19	53	200	195
Yolo	1	1	19	27	17	26	19	22	200	190
Totals	317	355	5,529	5,466	6,532	6,538	5,707	*6,937	*180	183

*Average.

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TABLE No. 2.

Statistics of Kindergartens, showing receipts, expenditures, valuation of property, and average annual salary paid teachers.

Counties	Receipts, total available funds, including balance on hand and receipts from all sources		Expenditures for all purposes		Valuation of all property		Average annual salary paid teachers	
	1913	1914	1913	1914	1913	1914	1913	1914
Alameda	$10,580 07	$22,552 55	$10,580 07	$22,552 55	$2,600 00	$2,740 00	$935 37	$1,288 41
Fresno	1,663 50	1,545 24	1,647 75	1,540 24	4,595 00	4,650 00	1,350 00	701 70
Humboldt	----------	1,368 18	----------	1,424 01	----------	215 00	----------	625 00
Los Angeles	204,868 40	228,719 34	204,868 40	228,719 34	146,600 00	37,100 00	787 22	795 59
Orange	4,330 00	5,000 00	4,330 00	5,000 00	6,400 00	6,400 00	945 00	930 00
Riverside	3,318 00	3,788 00	3,318 00	3,788 00	----------	5,400 00	754 00	598 00
Sacramento	25,518 03	19,255 72	25,518 03	19,255 72	26,750 00	27,300 00	745 00	665 86
San Bernardino	5,000 00	5,991 66	5,000 00	3,344 89	5,500 00	----------	810 29	825 00
San Diego	7,736 77	13,314 53	7,736 77	9,420 34	----------	----------	1,215 65	1,252 00
San Francisco	840 00	3,528 00	840 00	3,528 00	8 00	----------	840 00	882 00
Santa Barbara	12,162 86	11,487 32	11,900 54	10,858 59	13,500 00	15,500 00	756 25	756 25
Tehama	1,308 15	----------	610 81	----------	----------	----------	600 00	----------
Ventura	950 00	2,494 76	950 00	1,882 64	2,600 00	5,000 00	850 00	755 00
Yolo	1,093 43	1,107 45	720 75	702 68	175 00	175 00	700 00	665 00
Totals	$279,369 21	$320,152 75	$278,021 12	$312,017 00	$208,728 00	$104,480 00	*$868 36	*$822 30

*Average.

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ELEMENTARY SCHOOLS.

TABLE No. 3. Number of Districts, Average Daily Attendance, Number of Teachers Allowed on Attendance, Number of Teachers Employed.

TABLE No. 4. Number of Pupils Enrolled by Grades by Counties.

TABLE No. 5. Total Number of Pupils Enrolled by Counties, Number of Graduates, Percentage of Graduates on Eighth Grade Enrollment.

TABLE No. 6. Average Number of Days School Was Maintained, Average Daily Attendance.

TABLE No. 7. Apportionment of State School Funds, Total Receipts.

TABLE No. 8. Expenditures, Valuation of Property.

TABLE No. 9. County Tax Rate for Elementary Schools, Average Annual Amount Paid Teachers.

TABLE No. 9a. Average Special Tax Rate, Amount of Bonds Outstanding, Average Rate of Interest Paid on Bonds.

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STATISTICS OF ELEMENTARY SCHOOLS.

TABLE No. 3.

Number of districts and number of teachers.

Counties	Number of school districts at close of year		Number of teachers allowed on average attendance		Number of teachers actually employed in each county	
	1913	1914	1913	1914	1913	1914
Alameda	46	47	891.62	958.75	942	1,050
Alpine	3	3	3	3	3	3
Amador	35	37	52.50	56.05	57	59
Butte	80	78	161	162	159	168
Calaveras	52	46	68	63.76	66	64
Colusa	33	34	46.96	47.79	54	54
Contra Costa	55	56	164.38	176.25	166	178
Del Norte	16	16	20	20	20	24
El Dorado	54	57	57.08	58.25	57	57
Fresno	133	138	434.99	478.48	457	500
Glenn	41	41	56.89	57.89	57	61
Humboldt	102	102	185	188	184	190
Imperial	40	46	71	93	99	111
Inyo	21	22	28	29	28	28
Kern	87	92	186.57	201.50	200	224
Kings	37	40	92.03	96.42	85	88
Lake	38	38	46.30	45.57	45	43
Lassen	37	40	40	45	40	45
Los Angeles	148	152	2,120.41	2,336.50	2,571	2,848
Madera	41	44	57.50	63.78	53	67
Marin	45	45	93.58	96.86	103	109
Mariposa	29	28	28.57	28.26	30	30
Mendocino	120	120	160	163	150	154
Merced	63	63	100.73	107.19	108	116
Modoc	42	40	53	53	49	52
Mono	8	7	10	10	9	10
Monterey	89	92	131.73	133.57	141	140
Napa	52	52	85.98	87.83	86	86
Nevada	45	46	82	82	80	79
Orange	47	49	187.59	202.50	222	233
Placer	52	54	81.60	84.90	86	90
Plumas	32	31	35	34	35	34
Riverside	66	69	174.25	181.09	203	207
Sacramento	75	75	253.80	279.73	303	336
San Benito	37	35	49.28	46.57	45	44
San Bernardino	67	69	258.24	272.08	301	312
San Diego	118	109	357.51	383.83	362	397
San Francisco	1	1	1,199	1,236	1,237	1,227
San Joaquin	87	86	216.77	232.23	225	245
San Luis Obispo	91	91	125	127	142	140
San Mateo	36	36	127	132	127	129
Santa Barbara	62	61	121.17	122.08	143	118
Santa Clara	81	83	336.02	349.19	366	370
Santa Cruz	55	59	118.97	118.67	138	134
Shasta	108	107	131	130	129	128
Sierra	17	17	21	21	21	21
Siskiyou	89	90	120	122	118	118
Solano	51	52	109.60	112.52	117	119
Sonoma	148	149	263.42	270.14	263	274
Stanislaus	55	57	163.25	177.66	162	183
Sutter	35	34	46	47	47	49
Tehama	64	64	87.40	94.32	94	96
Trinity	26	22	28	26	29	26
Tulare	119	123	231.21	251.29	246	272
Tuolumne	32	34	53	54	52	54
Ventura	50	52	94.26	104.42	111	115
Yolo	42	40	69.84	70.08	77	75
Yuba	39	39	51	53	53	55
Totals	3,374	3,410	10,639	11,278	11,533	12,266

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TABLE No. 4.

Enrollment of pupils by sex and grades, by counties (Elementary Schools).

Counties	First grade				Second grade				Third grade			
	Boys		Girls		Boys		Girls		Boys		Girls	
	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914
Alameda	4,404	4,877	3,721	4,061	2,407	2,479	2,068	2,233	2,484	2,580	2,214	2,364
Alpine	9	10	13	5	6	4	1	1	4	5		
Amador	141	140	115	110	98	100	92	85	91	91	95	92
Butte	480	492	394	421	295	373	279	299	336	310	279	290
Calaveras	196	166	165	142	74	88	84	89	105	84	84	75
Colusa	92	102	100	85	79	68	84	94	75	84	63	91
Contra Costa	729	690	632	655	420	506	397	437	385	457	390	441
Del Norte	73	82	58	72	45	32	43	35	33	43	32	44
El Dorado	102	107	73	103	55	82	68	56	62	53	68	69
Fresno	1,877	2,150	1,576	1,849	1,183	1,246	1,046	1,011	1,070	1,201	1,042	1,119
Glenn	104	145	143	128	75	83	102	114	85	77	77	89
Humboldt	608	606	501	528	355	410	332	363	430	365	326	365
Imperial	419	572	337	465	179	281	151	258	183	261	195	214
Inyo	71	69	75	58	62	45	54	58	48	53	32	47
Kern	986	998	853	914	422	410	356	382	377	408	315	353
Kings	336	366	322	330	275	248	182	220	220	278	205	179
Lake	77	85	73	84	55	65	44	63	44	58	59	43
Lassen	77	113	78	100	66	75	59	69	49	76	32	67
Los Angeles	10,394	11,215	8,511	9,568	6,161	6,396	5,213	5,551	5,718	6,519	5,584	5,969
Madera	136	201	118	180	111	105	88	98	77	108	83	108
Marin	342	360	351	337	230	228	166	215	228	223	198	218
Mariposa	52	67	55	44	49	47	33	31	42	40	23	33
Mendocino	388	376	357	381	285	305	224	266	261	277	235	233
Merced	399	431	326	373	241	226	198	204	211	239	194	222
Modoc	106	96	117	97	76	71	74	95	87	89	73	67
Mono	12	19	15	29	10	12	12	15	16	6	5	6
Monterey	375	372	324	305	237	260	233	250	254	222	248	229
Napa	246	276	213	217	162	171	141	157	161	167	145	154
Nevada	198	152	179	177	128	142	132	145	139	125	130	140
Orange	726	862	657	794	557	525	509	523	470	529	448	531
Placer	258	262	207	217	186	180	109	151	177	194	176	141
Plumas	87	83	68	64	56	69	48	39	52	58	50	65
Riverside	646	657	545	577	400	426	372	362	372	403	382	366
Sacramento	1,153	1,344	858	1,085	654	711	567	594	618	737	586	600
San Benito	109	109	111	123	72	78	59	66	74	75	62	63

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San Bernardino	1,114	1,095	934	954	671	686	592	568	661	641	585	579
San Diego	1,442	1,629	1,344	1,423	835	860	747	867	767	859	811	801
San Francisco	6,284	6,685	5,143	5,672	3,375	4,099	2,831	3,415	3,473	3,412	3,008	2,846
San Joaquin	813	892	740	793	618	573	512	595	563	578	535	509
San Luis Obispo	368	329	309	290	244	227	223	187	201	224	195	210
San Mateo	676	706	595	578	338	315	300	300	301	311	215	295
Santa Barbara	487	497	436	438	285	280	281	252	255	290	247	312
Santa Clara	1,406	1,655	1,233	1,366	894	949	788	904	926	892	808	768
Santa Cruz	358	378	297	300	364	283	263	202	276	257	225	248
Shasta	281	272	259	297	178	184	187	150	174	176	187	173
Sierra	34	41	27	30	28	24	34	19	33	22	31	36
Siskiyou	322	322	307	292	208	195	186	166	201	203	209	207
Solano	362	385	298	338	268	237	213	234	235	252	208	200
Sonoma	1,001	1,060	816	893	566	583	444	492	579	551	510	461
Stanislaus	562	598	434	477	412	472	364	364	411	439	366	397
Sutter	122	133	87	118	68	94	68	64	71	75	84	76
Tehama	254	204	196	182	157	160	114	129	161	169	163	139
Trinity	41	36	36	56	36	26	32	22	24	36	29	29
Tulare	805	790	678	767	545	591	465	494	515	535	479	475
Tuolumne	135	171	125	137	96	94	89	90	91	97	101	83
Ventura	425	456	352	366	226	236	220	241	208	216	230	213
Yolo	166	193	161	165	129	122	115	130	104	132	104	129
Yuba	141	137	121	103	77	111	63	92	84	83	69	68
Totals	43,932	47,217	37,099	40,664	26,384	28,148	22,751	24,324	25,352	26,957	23,504	24,342

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TABLE No. 4—Continued.

Enrollment of pupils by sex and grades, by counties (Elementary Schools).

Counties	Fourth grade				Fifth grade				Sixth grade			
	Boys		Girls		Boys		Girls		Boys		Girls	
	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914
Alameda	2,427	2,533	2,271	2,235	2,173	2,254	1,966	2,163	1,950	2,446	1,813	1,963
Alpine	3	4	1		2	2	3	3	1	1		
Amador	99	91	88	83	98	89	85	85	86	81	77	75
Butte	315	349	244	270	330	302	289	259	262	276	242	254
Calaveras	110	98	91	89	89	98	99	90	93	89	75	86
Colusa	75	77	71	56	83	81	60	63	58	64	44	57
Contra Costa	388	407	366	406	357	403	351	396	291	326	272	298
Del Norte	35	34	36	32	29	37	23	32	24	22	18	24
El Dorado	87	61	77	69	64	72	50	78	57	57	74	41
Fresno	1,066	1,115	1,010	1,077	883	1,057	943	1,026	884	887	854	875
Glenn	66	91	71	85	97	71	76	85	87	93	76	74
Humboldt	356	392	347	303	335	345	317	341	284	297	246	296
Imperial	151	233	185	231	142	182	99	187	129	174	133	148
Inyo	57	66	39	43	57	55	41	48	39	52	52	31
Kern	352	379	358	339	308	349	291	327	270	293	245	269
Kings	181	236	203	205	163	178	144	175	160	150	157	151
Lake	64	39	64	60	58	72	59	60	52	59	49	65
Lassen	58	44	47	50	60	62	41	54	34	65	40	55
Los Angeles	5,789	6,172	5,346	5,792	5,298	5,584	4,763	5,242	4,945	5,119	4,496	4,769
Madera	74	90	83	100	98	90	79	88	61	92	48	78
Marin	226	228	199	177	195	234	170	204	157	189	145	166
Mariposa	37	38	30	23	41	35	35	32	29	24	34	21
Mendocino	259	256	245	248	227	249	215	216	222	195	207	206
Merced	202	222	193	186	182	179	169	161	146	170	158	162
Modoc	74	75	64	66	74	73	53	72	59	76	54	53
Mono	7	17	6	7	11	12	13	8	4	7	5	11
Monterey	230	244	198	212	209	225	221	202	172	192	153	186
Napa	162	166	181	152	184	183	140	172	133	150	141	133
Nevada	158	147	128	126	178	149	155	126	126	141	113	140
Orange	450	528	446	475	421	428	417	428	401	434	393	416
Placer	135	177	135	192	172	151	154	147	116	164	124	139
Plumas	59	53	56	44	53	70	43	45	49	39	42	44
Riverside	356	387	369	377	352	361	316	374	327	319	301	306
Sacramento	581	624	512	584	579	626	479	512	546	575	499	469
San Benito	71	60	64	59	68	68	63	61	62	64	60	53

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San Bernardino	606	646	621	601	567	537	534	556	527	514	443	505
San Diego	785	833	727	802	763	754	690	734	689	758	619	747
San Francisco	3,085	3,323	2,745	2,932	2,872	2,898	2,646	2,726	2,329	2,684	2,205	2,431
San Joaquin	512	560	491	527	491	534	431	515	402	414	400	396
San Luis Obispo	209	224	205	194	196	195	204	200	196	180	164	180
San Mateo	302	282	234	274	266	267	222	226	194	199	177	207
Santa Barbara	213	222	180	221	233	235	208	209	187	236	187	194
Santa Clara	790	872	794	827	813	837	685	742	694	748	611	616
Santa Cruz	229	274	255	246	235	206	218	225	207	239	192	212
Shasta	172	188	157	204	180	192	160	166	159	150	139	153
Sierra	32	36	24	30	29	29	47	29	20	24	30	30
Siskiyou	179	187	182	209	194	179	167	161	171	195	166	175
Solano	224	271	200	234	211	220	194	206	201	182	191	175
Sonoma	567	573	469	530	502	570	485	449	490	484	378	460
Stanislaus	363	417	370	401	370	400	348	364	313	314	295	314
Sutter	78	69	70	92	83	82	68	70	70	99	59	72
Tehama	173	167	140	167	136	171	160	143	169	166	137	155
Trinity	29	24	30	26	30	29	21	29	23	26	21	17
Tulare	486	537	441	489	471	520	435	456	445	440	442	453
Tuolumne	101	84	90	107	53	91	84	82	65	74	66	82
Ventura	178	175	156	210	173	190	177	172	185	167	147	163
Yolo	166	107	132	104	155	166	118	121	116	161	100	112
Yuba	85	93	56	67	81	75	60	69	76	77	76	70
Totals	24,324	25,933	22,593	24,047	22,774	23,803	20,784	22,292	20,244	21,918	18,685	20,056

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TABLE No. 4—Concluded.

Enrollment of pupils by sex and grades, by counties (Elementary Schools).

Counties	Seventh grade				Eighth grade				Totals			
	Boys		Girls		Boys		Girls		Boys		Girls	
	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914
Alameda	1,505	1,793	1,534	1,683	1,611	1,791	1,451	1,522	18,961	20,763	17,038	18,224
Alpine				4	2	2	5	3	27	28	23	16
Amador	86	76	76	58	70	84	83	93	769	752	711	681
Butte	251	236	264	262	239	242	267	261	2,508	2,580	2,258	2,316
Calaveras	72	77	87	74	92	86	91	97	831	786	776	742
Colusa	56	70	57	34	41	50	58	51	559	596	531	531
Contra Costa	239	261	236	240	181	212	207	212	2,990	3,262	2,851	3,085
Del Norte	23	20	31	16	20	17	27	30	282	287	268	285
El Dorado	63	41	65	62	79	79	89	73	569	552	564	554
Fresno	810	808	700	766	564	611	608	638	8,337	9,105	7,779	8,361
Glenn	94	88	72	70	132	164	120	140	741	812	737	785
Humboldt	254	293	254	236	265	268	300	276	2,887	2,976	2,623	2,708
Imperial	119	142	96	127	89	130	107	123	1,411	1,975	1,303	1,753
Inyo	56	34	50	53	43	48	44	49	433	422	407	387
Kern	210	236	201	230	159	176	205	201	3,084	3,249	2,824	3,015
Kings	135	118	120	144	102	109	141	112	1,572	1,684	1,474	1,516
Lake	54	59	65	40	49	54	50	60	453	491	458	475
Lassen	40	40	37	42	54	57	65	57	438	532	399	494
Los Angeles	4,361	4,949	4,233	4,662	4,195	4,653	4,336	4,442	46,861	50,607	42,480	45,995
Madera	67	64	63	58	48	56	44	60	672	806	606	770
Marin	159	163	132	147	136	160	104	130	1,673	1,785	1,465	1,594
Mariposa	24	21	30	51	22	31	47	49	296	303	287	284
Mendocino	195	190	234	194	136	149	165	199	1,973	1,997	1,882	1,943
Merced	130	140	100	146	112	114	102	114	1,622	1,721	1,440	1,568
Modoc	64	76	65	71	91	84	120	114	631	640	620	635
Mono	10	4	8	4	12	9	9	11	82	86	73	91
Monterey	163	155	164	145	133	131	152	130	1,773	1,801	1,698	1,659
Napa	122	122	118	134	110	119	115	109	1,280	1,354	1,194	1,228
Nevada	113	109	114	120	108	98	118	110	1,148	1,063	1,069	1,084
Orange	361	405	366	381	311	313	335	357	3,697	4,024	3,571	3,905
Placer	120	113	121	111	122	136	105	140	1,286	1,377	1,131	1,238
Plumas	27	35	33	46	34	31	58	50	417	438	398	397
Riverside	284	319	320	282	263	286	288	290	3,000	3,158	2,873	2,934
Sacramento	491	539	383	506	410	444	441	392	5,032	5,600	4,325	4,694
San Benito	40	53	61	53	62	45	68	67	558	561	548	545

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San Bernardino	470	496	437	404	394	406	439	403	5,010	5,021	4,585	4,590
San Diego	602	651	602	606	491	572	568	624	6,374	6,916	6,108	6,604
San Francisco	2,103	2,276	1,850	2,183	2,432	2,131	2,166	1,834	25,953	27,508	22,589	24,039
San Joaquin	370	352	344	332	360	353	351	348	4,129	4,256	3,804	4,015
San Luis Obispo	164	176	150	143	163	156	140	144	1,741	1,711	1,590	1,548
San Mateo	175	169	150	174	123	162	136	152	2,375	2,411	2,079	2,206
Santa Barbara	154	153	154	170	153	152	182	157	1,967	2,029	1,875	1,915
Santa Clara	604	581	596	577	568	551	550	655	6,695	7,085	6,065	6,455
Santa Cruz	170	169	180	173	170	157	195	173	1,909	1,963	1,825	1,779
Shasta	132	142	155	134	159	150	187	175	1,435	1,454	1,431	1,452
Sierra	28	20	27	32	40	50	60	40	244	246	280	246
Siskiyou	126	99	100	126	106	120	136	117	1,507	1,500	1,453	1,453
Solano	157	191	159	181	204	129	143	129	1,862	1,867	1,606	1,697
Sonoma	445	423	481	359	361	450	365	442	4,511	4,694	3,948	4,086
Stanislaus	235	279	273	293	262	232	241	258	2,928	3,151	2,691	2,868
Sutter	78	69	59	71	90	74	74	67	660	695	569	630
Tehama	98	122	97	124	114	119	112	121	1,262	1,278	1,119	1,163
Trinity	24	30	11	15	30	20	35	24	237	227	215	218
Tulare	395	392	380	385	406	407	395	374	4,068	4,212	3,715	3,893
Tuolumne	85	72	76	73	73	87	91	87	729	770	722	741
Ventura	158	167	173	166	149	148	129	157	1,702	1,755	1,584	1,688
Yolo	114	78	112	107	102	93	115	100	1,052	1,052	957	968
Yuba	47	76	63	74	66	50	83	59	657	702	591	602
Totals	17,738	18,933	17,185	18,256	17,113	17,772	17,418	17,367	197,861	210,676	180,082	191,348

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TABLE No. 5.

Enrollment of pupils by sex and grade; number of graduates; percentage of graduates on enrollment in eighth grade (Elementary Schools).

Counties	Grand total, boys and girls		Number of graduates from grammar schools				Percentage of graduates on enrollment in eighth grade	
			1913		1914			
	1913	1914	Boys	Girls	Boys	Girls	1913	1914
Alameda	35,999	38,987	1,017	1,072	1,037	1,097	.68	.64
Alpine	50	44	1	4	--------	4	.71	.80
Amador	1,480	1,433	22	35	48	54	.37	.55
Butte	4,766	4,896	150	172	151	169	.63	.63
Calaveras	1,607	1,528	27	30	44	48	.32	.51
Colusa	1,090	1,127	27	49	39	38	.77	.76
Contra Costa	5,841	6,347	134	162	207	200	.76	.97
Del Norte	550	572	14	21	12	21	.74	.70
El Dorado	1,133	1,106	50	46	45	55	.57	.65
Fresno	16,116	17,466	498	541	382	458	.88	.67
Glenn	1,478	1,597	38	47	56	55	.34	.36
Humboldt	5,510	5,684	109	192	184	203	.69	.79
Imperial	2,714	3,728	59	78	78	78	.56	.62
Inyo	840	809	15	34	33	40	.49	.75
Kern	5,908	6,264	88	91	93	123	.84	.58
Kings	3,046	3,200	72	132	50	70	.74	.54
Lake	911	966	34	39	46	45	.73	.80
Lassen	837	1,026	13	22	13	12	.29	.22
Los Angeles	89,343	96,602	2,875	3,111	3,123	3,381	.69	.71
Madera	1,278	1,576	22	31	37	38	.58	.65
Marin	3,138	3,379	122	102	110	98	.93	.72
Mariposa	583	587	10	19	14	20	.35	.42
Mendocino	3,855	3,940	121	143	134	164	.87	.85
Merced	3,063	3,289	87	99	93	95	.87	.82
Modoc	1,251	1,275	29	39	28	44	.32	.36
Mono	155	177	2	3	5	6	.24	.55
Monterey	3,466	3,460	99	118	101	104	.77	.78
Napa	2,474	2,582	78	83	120	99	.71	.96
Nevada	2,217	2,147	54	75	72	79	.57	.73
Orange	7,268	7,929	191	260	176	240	.61	.62
Placer	2,417	2,615	60	70	87	101	.60	.68
Plumas	815	835	29	30	9	24	.64	.41
Riverside	5,873	6,092	109	118	218	226	.41	.77
Sacramento	9,357	10,294	212	243	346	378	.52	.86
San Benito	1,106	1,106	41	41	30	64	.63	.84
San Bernardino	9,595	9,611	261	303	317	343	.68	.81
San Diego	12,482	13,520	344	453	454	481	.75	.78
San Francisco	48,542	51,547	1,275	1,175	1,299	1,390	.53	.68
San Joaquin	7,933	8,271	172	217	225	234	.54	.65
San Luis Obispo	3,331	3,259	121	127	139	120	.81	.86
San Mateo	4,454	4,617	104	116	137	143	.85	.89
Santa Barbara	3,842	3,944	114	145	98	149	.77	.81
Santa Clara	12,760	13,540	391	429	438	450	.73	.73
Santa Cruz	3,734	3,742	123	157	150	156	.80	.93
Shasta	2,866	2,906	71	73	69	79	.41	.45
Sierra	524	492	10	5	4	7	.15	.21
Siskiyou	2,960	2,953	25	45	42	46	.29	.37
Solano	3,468	3,564	98	117	91	102	.62	.71
Sonoma	8,459	8,780	206	232	304	323	.60	.70
Stanislaus	5,619	6,019	147	145	133	178	.57	.64
Sutter	1,229	1,325	45	48	65	51	.56	.82
Tehama	2,380	2,441	62	60	93	111	.54	.84
Trinity	452	415	13	19	8	11	.50	.43
Tulare	7,783	8,105	276	302	313	293	.72	.78
Tuolumne	1,451	1,511	24	44	57	58	.42	.66
Ventura	3,286	3,443	97	75	116	133	.62	.81
Yolo	2,009	2,020	84	115	87	85	.91	.89
Yuba	1,248	1,301	35	40	18	28	.50	.42
Totals	377,943	402,024	10,695	11,794	11,878	12,902	*.65	*.71

*Average.

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TABLE No. 6.

Average number of days school was maintained; average daily attendance by counties (Elementary Schools).

Counties	Average number of days school was maintained		Average daily attendance	
	1913	1914	1913	1914
Alameda	185	187	28,404	30,492
Alpine	168	170	33	32
Amador	171	174	1,221	1,267
Butte	164	163	3,859	4,015
Calaveras	178	178	1,342	1,289
Colusa	159	170	929	955
Contra Costa	161	174	4,928	5,376
Del Norte	177	182	412	427
El Dorado	152	161	896	923
Fresno	173	173	13,236	14,551
Glenn	176	174	1,208	1,291
Humboldt	182	182	4,531	4,668
Imperial	157	159	1,947	2,618
Inyo	167	165	649	651
Kern	168	169	4,658	5,073
Kings	164	164	2,578	2,717
Lake	167	166	756	782
Lassen	163	162	596	744
Los Angeles	174	170	66,952	74,036
Madera	167	172	1,070	1,334
Marin	181	180	2,556	2,716
Mariposa	154	161	415	389
Mendocino	165	166	3,060	3,189
Merced	170	168	2,544	2,756
Modoc	155	152	947	954
Mono	177	176	106	114
Monterey	180	176	2,884	2,854
Napa	181	178	2,062	2,136
Nevada	167	165	1,867	1,812
Orange	166	166	5,902	6,488
Placer	160	164	2,056	2,231
Plumas	156	162	596	607
Riverside	177	177	4,798	5,073
Sacramento	171	172	7,219	8,134
San Benito	171	167	893	922
San Bernardino	177	170	7,538	7,896
San Diego	167	172	9,428	10,448
San Francisco	185	205	38,096	39,245
San Joaquin	172	173	6,308	6,707
San Luis Obispo	173	171	2,689	2,664
San Mateo	203	200	3,704	3,898
Santa Barbara	187	192	3,140	3,260
Santa Clara	188	188	10,416	10,863
Santa Cruz	182	183	3,130	3,115
Shasta	163	160	2,214	2,275
Sierra	168	167	426	405
Siskiyou	150	143	2,254	2,315
Solano	189	190	2,851	2,946
Sonoma	187	187	6,694	7,048
Stanislaus	183	180	4,776	5,229
Sutter	178	179	1,056	1,130
Tehama	165	167	1,833	1,935
Trinity	149	148	337	347
Tulare	185	178	6,331	6,892
Tuolumne	164	171	1,217	1,303
Ventura	181	182	2,585	2,793
Yolo	181	179	1,731	1,781
Yuba	156	156	1,020	1,118
Totals	Av. 171—	Av. 172+	297,884	319,229

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TABLE No. 7.

Total receipts from State School Fund by counties; Total receipts from all sources, including state apportionments.

Counties	State funds apportioned		*Total receipts	
	Sept. 11, 1912 March 1, 1913 July 14, 1913	Sept. 16, 1913 March 3, 1914 July 7, 1914	1913	1914
Alameda	$463,474 80	$480,245 24	$1,717,580 50	$1,887,320 76
Alpine	1,058 72	1,048 98	3,911 10	3,822 42
Amador	25,948 04	24,187 26	74,966 28	72,505 80
Butte	71,673 48	75,212 54	230,253 86	258,440 23
Calaveras	30,106 86	29,158 52	59,001 83	54,709 66
Colusa	19,592 42	20,156 74	66,825 10	64,283 58
Contra Costa	77,787 96	85,742 68	453,110 81	363,097 22
Del Norte	8,804 52	8,752 72	24,889 91	26,002 17
El Dorado	22,902 92	22,387 76	55,032 17	51,423 58
Fresno	211,372 10	228,665 66	758,001 49	1,022,858 07
Glenn	23,365 12	25,166 98	83,624 71	120,891 43
Humboldt	86,010 12	87,300 86	252,623 62	265,951 27
Imperial	28,851 24	35,389 82	109,206 48	218,029 71
Inyo	12,547 88	12,879 94	48,713 14	87,246 62
Kern	82,188 50	88,843 98	486,447 61	543,614 94
Kings	42,156 06	46,364 18	162,152 79	184,656 07
Lake	18,686 88	18,424 36	40,991 69	39,421 09
Lassen	15,297 88	15,399 76	51,568 83	61,754 01
Los Angeles	1,037,055 30	1,136,687 62	6,574,637 95	5,855,116 58
Madera	21,302 76	24,069 20	116,965 48	112,785 69
Marin	44,265 32	46,552 36	145,472 02	179,794 72
Mariposa	10,884 92	10,902 40	31,850 93	31,619 57
Mendocino	67,049 32	67,723 60	190,219 45	195,565 52
Merced	45,880 84	48,231 14	181,636 37	196,400 58
Modoc	21,312 44	21,829 82	60,902 92	67,989 82
Mono	3,321 44	3,460 36	14,887 92	13,976 29
Monterey	57,647 04	59,061 54	164,739 31	160,120 31
Napa	40,686 14	40,176 72	107,787 63	111,592 93
Nevada	37,679 36	37,415 02	92,217 12	81,944 78
Orange	93,804 66	100,369 62	417,606 73	502,263 12
Placer	38,577 36	39,027 36	132,599 01	129,011 63
Plumas	13,003 08	14,149 76	48,517 27	50,212 18
Riverside	82,613 86	87,032 38	340,781 22	468,098 53
Sacramento	124,821 94	128,854 14	617,702 57	794,555 95
San Benito	20,500 68	20,410 58	54,897 58	60,670 60
San Bernardino	126,602 60	132,854 28	602,912 83	667,817 85
San Diego	153,537 90	174,795 18	688,735 94	1,102,189 78
San Francisco	608,363 04	644,899 76	1,897,106 46	1,891,656 72
San Joaquin	106,876 30	111,342 98	409,546 00	902,127 53
San Luis Obispo	56,333 80	55,612 34	187,475 97	159,233 96
San Mateo	61,215 12	65,308 24	297,259 75	302,828 72
Santa Barbara	58,133 02	58,710 90	235,294 43	197,778 87
Santa Clara	171,984 96	178,373 96	668,932 12	636,030 75
Santa Cruz	58,153 56	58,100 30	169,724 53	179,040 74
Shasta	51,899 12	52,808 84	127,675 95	128,516 48
Sierra	9,131 64	9,109 56	25,228 69	25,556 70
Siskiyou	49,957 24	50,421 24	124,567 00	120,414 59
Solano	54,054 24	53,230 06	172,982 57	172,384 94
Sonoma	121,079 96	126,502 64	338,202 35	379,111 90
Stanislaus	77,252 90	84,083 06	365,397 04	299,233 51
Sutter	19,893 56	21,067 36	58,828 95	69,366 55
Tehama	36,825 16	38,456 98	118,776 77	134,383 41
Trinity	10,005 48	10,053 22	24,790 84	25,961 96
Tulare	107,401 82	115,161 36	489,323 75	534,576 62
Tuolumne	24,863 92	24,276 02	63,256 94	56,059 88
Ventura	46,338 04	46,985 10	189,142 12	167,797 09
Yolo	33,565 18	33,142 86	116,074 32	112,766 94
Yuba	20,803 36	21,991 00	51,895 33	64,914 94
Totals	†$5,067,553 80	$5,158,579 04	*$21,395,454 14	*$22,666,883 03

*Includes county and district apportionments.

†How apportioned for year:

September 11, 1912,	$250.00 per teacher, total	$2,520,750 00
March 1, 1913,	$7.04 per pupil on attendance	1,974,614 40
July 1913,	$2.04 per pupil on attendance	572,189 40
Total apportioned for year		$5,067,553 80

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TABLE No. 8.

Showing expenditures and valuation of property for Elementary Schools.

Counties	Expenditure for all purposes		Valuation of all property	
	1913	1914	1913	1914
Alameda	$1,562,804 02	$1,736,560 40	$5,020,545 00	$6,141,712 00
Alpine	2,298 68	2,257 75	3,449 00	3,319 00
Amador	49,580 85	53,639 86	91,581 00	92,331 00
Butte	221,886 00	174,656 33	355,516 00	371,680 00
Calaveras	51,185 38	48,321 56	63,085 00	62,165 00
Colusa	52,013 66	51,674 96	101,025 00	115,610 00
Contra Costa	360,358 75	233,594 34	814,471 00	585,697 00
Del Norte	18,831 27	21,077 91	22,918 00	24,210 00
El Dorado	40,015 28	39,492 83	72,375 00	63,170 00
Fresno	598,907 77	725,318 84	1,124,060 00	1,301,674 00
Glenn	87,672 25	86,357 56	132,165 00	153,345 00
Humboldt	192,077 25	192,834 32	381,855 00	398,470 00
Imperial	99,034 22	168,286 65	222,632 00	310,742 00
Inyo	37,204 73	63,778 00	50,270 00	92,575 00
Kern	279,214 97	479,259 08	602,353 00	831,625 00
Kings	113,642 16	147,113 43	228,920 00	252,590 00
Lake	33,528 51	33,412 70	57,835 00	54,676 00
Lassen	35,632 63	40,529 36	44,920 00	50,360 00
Los Angeles	5,353,890 90	5,136,490 32	12,160,967 00	12,745,988 00
Madera	67,235 80	99,442 07	155,230 00	187,875 00
Marin	116,918 71	127,956 62	295,585 00	294,785 00
Mariposa	23,166 94	27,371 63	25,355 00	29,509 00
Mendocino	118,118 03	131,836 70	218,253 00	217,844 00
Merced	127,143 58	151,236 42	266,683 00	291,808 00
Modoc	53,553 11	49,883 05	82,898 00	87,995 00
Mono	8,599 99	9,207 08	15,625 00	15,350 00
Monterey	154,505 13	141,892 82	393,253 00	392,136 00
Napa	82,333 54	85,289 48	201,444 00	201,217 00
Nevada	82,646 77	78,546 93	178,395 00	178,334 00
Orange	327,691 53	382,842 67	736,655 00	846,583 00
Placer	86,109 94	101,439 81	157,552 00	173,970 00
Plumas	35,306 71	34,040 66	71,631 00	72,508 00
Riverside	238,174 08	293,871 95	605,151 00	688,890 00
Sacramento	518,525 40	546,957 57	1,317,551 00	1,378,408 00
San Benito	39,581 69	41,993 90	88,833 00	88,833 00
San Bernardino	431,770 62	484,559 23	940,014 00	1,053,138 00
San Diego	590,814 75	715,164 57	892,795 00	1,500,918 00
San Francisco	1,868,411 86	1,906,405 65	9,879,500 00	10,196,521 00
San Joaquin	373,068 63	450,808 59	232,320 00	891,306 00
San Luis Obispo	134,749 73	128,785 36	241,910 00	253,610 00
San Mateo	218,098 50	253,163 25	536,700 00	576,600 00
Santa Barbara	188,834 04	164,386 62	450,277 00	422,894 00
Santa Clara	457,025 84	548,570 14	1,092,539 00	1,207,872 00
Santa Cruz	142,131 16	148,176 04	375,102 00	385,844 00
Shasta	103,622 51	103,867 94	259,235 00	260,690 00
Sierra	17,842 12	19,796 64	40,317 00	38,397 00
Siskiyou	103,226 92	97,046 23	170,995 00	171,190 00
Solano	131,998 43	142,990 41	246,380 00	251,925 00
Sonoma	254,928 32	281,084 40	609,245 00	610,525 00
Stanislaus	275,067 80	261,005 81	617,250 00	659,854 00
Sutter	42,738 97	51,594 23	57,290 00	72,350 00
Tehama	81,859 12	89,834 54	179,110 00	186,565 00
Trinity	19,354 44	19,980 01	23,737 00	26,195 00
Tulare	350,091 17	377,763 74	866,240 00	934,490 00
Tuolumne	49,611 76	44,782 81	91,415 00	90,795 00
Ventura	146,713 56	132,357 72	232,855 00	264,192 00
Yolo	79,817 30	81,431 48	173,854 00	184,037 00
Yuba	44,733 73	55,892 02	105,234 00	114,385 00
Totals	$17,350,951 51	$18,297,912 99	$45,175,200 00	$49,157,277 00

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TABLE No. 9.

Showing county tax rate for Elementary Schools and average annual salary paid Teachers.

Counties	County tax rate for elementary schools on each $100 valuation		Average annual salary paid teachers in elementary schools			
			1913		1914	
	1913	1914	Men	Women	Men	Women
Alameda	.30	28	$1,691 41	$1,099 43	$1,583 90	$1,082 19
Alpine	.15	.15	----------	682 50	----------	657 91
Amador	.30	.30	944 28	618 07	888 18	635 71
Butte	.28	.28	1,652 92	715 23	943 75	719 73
Calaveras	.30	.28	748 03	651 44	726 00	653 00
Colusa	.19	.192	1,007 19	696 22	1,081 07	667 58
Contra Costa	.26	.263	1,059 81	772 98	1,252 15	871 16
Del Norte	.17	.21	675 00	681 00	630 00	687 24
El Dorado	.19	.22	628 18	568 26	610 00	560 67
Fresno	.27	.25	1,157 00	777 18	1,143 12	799 69
Glenn	.19	.21	851 82	674 62	875 28	686 13
Humboldt	.25	.27	854 00	770 00	877 53	771 88
Imperial	.18	.50	890 76	665 80	1,376 29	799 18
Inyo	.27	.26	887 50	735 62	1,200 00	743 46
Kern	.14	.145	1,162 00	809 17	1,215 62	803 98
Kings	.33	.30	1,180 00	817 00	976 92	837 13
Lake	.246	.24	830 30	587 50	740 18	633 52
Lassen	.34	33	787 91	608 29	750 94	596 03
Los Angeles	.195	.19	1,508 54	1,010 04	1,371 04	1,045 09
Madera	.25	.29	938 21	756 60	892 03	750 24
Marin	.23	.23	1,680 83	769 89	1,975 25	851 99
Mariposa	.246	.295	714 62	591 38	580 94	621 39
Mendocino	.32	.32	787 57	596 68	773 78	614 58
Merced	.231	.231	959 54	693 92	988 29	658 68
Modoc	.30	.30	824 37	644 36	826 25	630 71
Mono	.41	.40	863 20	701 25	983 33	690 00
Monterey	.25	.26	990 62	734 61	1,063 00	759 00
Napa	.22	.22	1,238 00	728 57	1,285 00	725 62
Nevada	.46	.46	1,504 14	780 39	1,256 85	778 02
Orange	.24	.23	1,050 59	746 19	1,198 81	752 61
Placer	.336	33	950 86	745 08	1,004 46	696 74
Plumas	.16	.16	713 33	688 96	656 66	676 00
Riverside	.28	.29	1,051 00	727 00	978 65	753 51
Sacramento	.14	.19	1,308 12	991 26	1,223 65	1,057 20
San Benito	.25	25	930 50	682 90	1,029 37	656 21
San Bernardino	.30	.30	1,462 50	767 46	1,268 26	801 94
San Diego	.21	.24	1,256 00	736 13	1,063 00	833 49
San Francisco	.22	.208	1,266 85	1,053 53	1,299 89	1,064 85
San Joaquin	.15	.18	1,147 40	875 14	1,227 45	890 09
San Luis Obispo	.25	.25	918 30	624 00	949 33	687 34
San Mateo	.26	.29	1,415 83	857 00	1,760 00	889 78
Santa Barbara	.20	.23	1,215 63	723 35	1,151 87	800 00
Santa Clara	.22	.25	1,249 85	812 59	1,347 53	852 89
Santa Cruz	.34	.33	1,348 33	724 85	1,336 14	789 37
Shasta	.35	.35	731 27	638 08	746 46	637 01
Sierra	.306	308	974 06	684 49	954 80	666 28
Siskiyou	.28	.24	822 17	644 37	753 05	641 20
Solano	.26	.25	1,199 25	833 76	1,410 00	848 05
Sonoma	.29	29	1,015 00	746 85	847 74	686 39
Stanislaus	.27	.30	1,015 88	720 93	1,090 00	743 15
Sutter	.27	.22	907 15	708 30	927 95	720 54
Tehama	.335	.324	790 36	618 94	763 85	665 00
Trinity	.27	.26	665 00	567 00	1,000 00	596 80
Tulare	.33	.35	1,090 74	781 69	1,118 36	774 30
Tuolumne	.20	.16	859 00	700 00	736 30	616 43
Ventura	.17	.17	1,435 71	716 83	1,319 48	764 11
Yolo	.179	.178	1,009 06	756 28	1,193 43	754 12
Yuba	.25	30	856 85	657 03	876 00	705 80
Average	.255	.264	$1,021 63	$731 02	$1,018 96	$745 91

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TABLE No. 9a.

Showing average special district tax rate for maintenance and for buildings, the total bonded debt outstanding, and the average rate of interest paid on bonds.

Counties	Special tax for maintenance	Special tax for building	Total outstanding bonds	Average rate of interest paid on bonds
Alameda	.18	.14	$1,599,725 00	4.8 %
Alpine				
Amador		.214		
Butte	.345		177,600 00	5.2 %
Calaveras				
Colusa	.193	.50	26,000 00	6.0 %
Contra Costa	.17	.06	455,400 00	5.0 %
Del Norte				
El Dorado				
Fresno	.17	.50	797,598 00	5.8 %
Glenn	.16		81,500 00	5.05 %
Humboldt	.256	.960	55,500 00	4.7 %
Imperial	.207	.70	179,850 00	6.0 %
Inyo	.08		59,150 00	6.7 %
Kern	.23	.30	325,100 00	6.5 %
Kings			130,560 00	5.5 %
Lake	.18		1,775 00	7.0 %
Lassen	.10		8,840 00	6.6 %
Los Angeles	.184		4,911,413 00	5.0 %
Madera	.144		111,850 00	6.3 %
Marin	.197		125,450 00	5. +%
Mariposa		.32	5,300 00	6.0 %
Mendocino	.243		31,070 00	5.7 %
Merced	.20	.70	138,875 00	6.0 %
Modoc	.065		43,100 00	6.4 %
Mono		.70		
Monterey	.58	.50	36,700 00	6.0 %
Napa	.125	.70	30,700 00	5.0 %
Nevada		.20		
Orange		.326	325,200 00	5.0 %
Placer	.165	.35	30,900 00	5.0 %
Plumas	.24			
Riverside	.22		232,500 00	5.8 %
Sacramento	.166	.86	751,700 00	5.0 %
San Benito				
San Bernardino	.202	.10	536,500 00	4.8 %
San Diego	.23	.29	878,400 00	5.6 %
San Francisco			5,978,600 00	4.5 %
San Joaquin	.195		708,295 00	6.0 %
San Luis Obispo	.191		15,030 00	5.6 %
San Mateo	.114	.38	265,600 00	5.0 %
Santa Barbara	.12		102,137 00	5.3 %
Santa Clara	.191	.223	526,300 00	5.1 %
Santa Cruz	.15		105,000 00	5.0 %
Shasta	.185	.57	11,410 00	5.8 %
Sierra	.20			
Siskiyou	.22		25,350 00	6.0 %
Solano	.14	.70	43,500 00	5.2 %
Sonoma	.14	.26	187,753 00	5.3 %
Stanislaus	.23	.32	500,476 00	5.0 %
Sutter	.125	.133	7,000 00	6.0 %
Tehama	.20	.148	28,000 00	5.8 %
Trinity				
Tulare	.207	.212	449,615 00	6.2 %
Tuolumne			39,000 00	5.5 %
Ventura	114	.175	63,825 00	5.4 %
Yolo	.071	.70	3,750 00	5.57 %
Yuba				
Totals	*.215	*.408	$21,148,897 00	*5.4 %

*Averages

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HIGH SCHOOLS.

TABLE No. 10. Number of Schools, Number of Teachers Employed, Average Number of Days School Was Maintained.

TABLE No. 11. Enrollment of Students by Grades, by Sex and by Counties.

TABLE No. 12. Average Daily Attendance, Number of Graduates, Percentage of Graduates, on Enrollment in Fourth Year.

TABLE No. 13. Total State Aid to High Schools by Counties, Total Receipts, Total Expenditures.

TABLE No. 14. Valuation of Property, Average Annual Amount Paid Teachers, Average District Tax Rate for Support of High Schools.

TABLE No. 14a. Average Special Tax Rate for Maintenance, Buildings, Outstanding Bonded Indebtedness and Average Rate of Interest on Bonds.

TABLE No. 15. General Statement in Review Since 1851.

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TABLE No. 10.

Statistics of Secondary (High) Schools, showing number of schools, number of teachers, and average number of days taught by counties.

Counties	Number of schools		Number of teachers				Average number of days school was maintained	
			1913		1914			
	1913	1914	Men	Women	Men	Women	1913	1914
Alameda	8	8	68	142	70	166	192	186
Alpine								
Amador	3	3	2	7	2	10	189	187
Butte	3	4	11	13	16	15	184	180
Calaveras	2	2	3	5	4	4	200	200
Colusa	5	5	8	13	8	16	190	180
Contra Costa	7	7	12	26	15	29	189	189
Del Norte	1	1	1	4	1	4	200	200
El Dorado	1	1	2	4	2	4	191	191
Fresno	12	12	41	56	48	59	175	177
Glenn	2	2	6	5	6	6	197	197
Humboldt	4	4	9	20	12	19	191	186
Imperial	5	5	17	21	21	25	172	170
Inyo	2	2	3	6	3	6	184	175
Kern	2	2	13	10	22	14	177	172
Kings	3	3	8	10	10	11	180	171
Lake	1	1	2	3	2	3	170	173
Lassen	1	1	3	4	2	4	195	173
Los Angeles	36	38	311	517	358	578	187	184
Madera	1	1	2	4	4	4	190	192
Marin	3	3	8	13	9	15	190	189
Mariposa								
Mendocino	7	7	11	16	11	18	189	190
Merced	5	6	10	15	11	20	199	200
Modoc	2	2	3	7	4	7	190	187
Mono								
Monterey	5	5	12	20	11	22	189	187
Napa	3	3	8	10	7	14	190	191
Nevada	3	3	3	12	3	13	188	189
Orange	5	5	34	39	40	52	180	180
Placer	5	3	6	11	9	12	189	190
Plumas	3	1	3		2	2	170	190
Riverside	10	10	30	36	37	38	173	171
Sacramento	4	5	25	28	26	32	186	184
San Benito	1	1	5	3	5	3	189	191
San Bernardino	6	6	40	47	45	55	181	184
San Diego	9	9	41	54	45	71	181	190
San Francisco	6	7	75	66	85	71	185	205
San Joaquin	4	4	17	20	19	23	185	189
San Luis Obispo	3	3	9	9	9	11	189	182
San Mateo	3	4	8	13	9	17	191	189
Santa Barbara	4	4	17	23	20	19	189	190
Santa Clara	8	8	37	67	40	74	188	199
Santa Cruz	3	3	9	22	15	21	189	197
Shasta	3	3	8	8	9	8	186	189
Sierra	1	1	1	2	1	2	200	192
Siskiyou	3	3	5	9	5	10	184	191
Solano	6	6	10	22	15	20	197	197
Sonoma	6	6	16	33	16	34	190	200
Stanislaus	7	8	20	18	22	27	189	195
Sutter	1	1	2	3	2	3	181	192
Tehama	2	2	4	10	6	10	185	192
Trinity	1	1	2	2	2	2	193	191
Tulare	7	8	22	37	31	43	172	171
Tuolumne	2	2	4	9	4	9	183	182
Ventura	5	5	15	18	14	20	194	190
Yolo	3	3	3	16	6	16	200	192
Yuba	2	2	4	7	5	6	179	179
Totals	246	255	1,049	1,595	1,206	1,791	*187	*187

*Averages.

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TABLE No. 11.

Statistics of Secondary (High) Schools, showing number of pupils enrolled.

Counties	First year				Second year				Third year			
	Boys		Girls		Boys		Girls		Boys		Girls	
	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914
Alameda	901	1,037	1,094	1,156	742	716	867	919	456	525	477	518
Alpine												
Amador	22	24	45	44	11	25	18	42	6	6	7	15
Butte	94	120	89	183	80	94	107	101	56	60	95	65
Calaveras	20	15	22	21	19	16	21	18	10	7	16	17
Colusa	45	45	45	61	32	38	29	40	7	20	34	25
Contra Costa	95	100	106	150	68	67	79	87	27	53	71	57
Del Norte	13	12	20	18	9	7	11	12	4	7	11	7
El Dorado	20	14	21	26	14	14	19	17	7	13	15	14
Fresno	340	454	426	513	197	201	256	230	126	147	174	210
Glenn	38	36	42	40	21	29	25	33	7	16	24	20
Humboldt	94	105	140	151	68	68	111	111	41	63	68	98
Imperial	82	103	100	126	31	71	45	63	24	37	46	45
Inyo	31	25	32	36	12	11	15	30	8	9	7	14
Kern	95	95	106	83	55	62	71	76	29	54	41	50
Kings	58	56	87	75	32	26	28	48	6	27	23	37
Lake	16	19	23	17	5	15	14	18	10	6	13	9
Lassen	14	8	13	8	7	8	6	13	5	5	5	4
Los Angeles	5,785	7,399	5,510	6,933	1,905	2,051	2,166	2,307	1,280	1,443	1,480	1,692
Madera	22	12	27	24	7	15	19	23	4	7	5	10
Marin	79	79	91	88	44	64	66	77	37	31	47	49
Mariposa												
Mendocino	68	73	99	103	44	51	56	81	29	35	39	42
Merced	66	88	80	80	28	36	47	57	17	21	34	40
Modoc	25	33	21	28	16	18	8	14	10	12	14	6
Mono												
Monterey	91	70	113	98	70	65	62	84	31	54	43	48
Napa	59	70	66	99	41	47	58	62	28	44	36	51
Nevada	60	67	68	66	29	42	49	53	19	20	28	30
Orange	252	262	264	383	157	177	220	227	127	134	154	182
Placer	68	46	81	55	19	40	37	50	17	21	26	41
Plumas	5	5	11	10	1	2	3	6	2	3		2
Riverside	224	205	219	236	148	164	128	172	115	110	122	101
Sacramento	406	349	332	296	149	160	208	208	102	117	154	172
San Benito	24	22	23	36	20	17	17	24	16	12	18	14

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San Bernardino	291	290	344	338	196	197	201	231	128	137	159		166
San Diego	464	554	518	383	220	263	205	309	155	180	184		196
San Francisco	1,565	1,904	1,252	1,641	629	681	727	676	280	335	309		348
San Joaquin	139	166	185	197	85	110	115	145	79	81	90		95
San Luis Obispo	47	59	61	62	28	27	41	40	25	15	26		22
San Mateo	58	136	65	133	36	42	63	46	27	19	39		34
Santa Barbara	125	147	135	171	75	67	82	96	44	44	59		44
Santa Clara	229	332	316	413	192	263	277	368	231	173	324		239
Santa Cruz	134	157	138	172	71	73	84	90	42	50	78		72
Shasta	40	50	55	59	26	37	48	51	18	12	25		22
Sierra	6	7	4	5	2	3	6	3	4	3	3		3
Siskiyou	33	34	42	44	14	24	38	36	21	9	24		33
Solano	111	113	141	138	72	75	108	104	39	40	55		51
Sonoma	186	177	233	228	111	113	144	165	77	75	101		119
Stanislaus	128	159	134	165	81	86	93	103	62	62	75		79
Sutter	27	21	17	16	17	19	12	15	3	13	8		10
Tehama	51	63	73	73	19	27	53	53	13	16	40		42
Trinity	3	6	2	10	5	6	5	3	4	2	11		4
Tulare	219	223	256	259	187	161	196	211	99	119	132		166
Tuolumne	22	19	40	43	23	22	38	34	12	12	18		32
Ventura	85	106	109	91	71	70	79	79	29	35	47		57
Yolo	61	57	70	83	41	51	57	63	22	24	41		48
Yuba	40	32	31	41	19	25	33	13	24	7	24		24
Totals	13,276	15,860	13,657	16,206	6,303	6,859	7,571	8,137	4,101	4,582	5,197		5,591

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TABLE No. 11—Continued.

Statistics of Secondary (High) Schools, showing number of students enrolled.

Counties	Fourth year				Total enrolled				Grand total	
	Boys		Girls		Boys		Girls			
	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914
Alameda	346	363	440	439	2,445	2,641	2,878	2,932	5,323	5,573
Alpine										
Amador	4	4	3	6	43	59	73	107	116	166
Butte	48	47	60	69	278	321	351	418	629	739
Calaveras	5	12	5	13	54	50	64	69	118	119
Colusa	8	9	15	27	92	112	123	153	215	265
Contra Costa	37	31	39	63	227	251	295	357	522	608
Del Norte	7	8	14	17	33	34	56	54	89	88
El Dorado	6	6	13	12	47	47	68	69	115	116
Fresno	121	133	169	180	784	935	1,025	1,133	1,809	2,068
Glenn	17	5	15	17	83	86	106	110	189	196
Humboldt	36	37	68	68	239	273	387	428	626	701
Imperial	14	28	30	45	151	239	221	279	372	518
Inyo	10	6	19	7	61	51	73	87	134	138
Kern	22	34	37	55	201	245	255	264	456	509
Kings	11	15	12	34	107	124	150	194	257	318
Lake	7	10	12	12	38	50	62	56	100	106
Lassen	6	1	10	4	32	22	34	29	66	51
Los Angeles	948	1,164	1,501	1,682	9,918	12,057	10,657	12,614	20,575	24,671
Madera	7	1	13	7	40	35	64	64	104	99
Marin	18	29	48	40	178	203	252	256	430	459
Mariposa										
Mendocino	21	25	33	40	162	184	227	266	389	450
Merced	9	14	28	43	120	159	189	220	309	379
Modoc	5	10	9	16	56	73	52	64	108	137
Mono										
Monterey	31	27	47	49	223	216	265	279	488	495
Napa	20	31	27	36	148	192	187	248	335	440
Nevada	12	16	12	28	120	145	157	177	277	322
Orange	115	135	148	144	651	708	786	936	1,437	1,644
Placer	14	16	17	31	118	123	161	177	279	300
Plumas		2			8	12	14	18	22	30
Riverside	77	106	98	110	564	585	567	619	1,131	1,204
Sacramento	74	80	117	125	731	706	811	801	1,542	1,507
San Benito	10	12	18	18	70	63	76	92	146	155

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San Bernardino	110	117	162	159	727	741	866	894	1,593	1,635
San Diego	117	132	142	138	956	1,129	1,049	1,226	2,005	2,355
San Francisco	134	171	253	244	2,608	3,091	2,541	2,909	5,149	6,000
San Joaquin	45	63	76	87	348	420	466	524	814	944
San Luis Obispo	13	22	39	34	113	123	167	158	280	281
San Mateo	18	26	33	29	139	223	200	242	339	465
Santa Barbara	54	50	85	76	298	308	361	387	659	695
Santa Clara	263	177	380	253	915	945	1,297	1,273	2,212	2,218
Santa Cruz	30	56	48	64	277	336	368	398	645	734
Shasta	14	12	30	22	98	111	158	154	256	265
Sierra		1	2	1	12	14	15	12	27	26
Siskiyou	10	17	20	16	78	84	124	129	202	213
Solano	25	33	61	60	247	261	365	353	612	614
Sonoma	43	59	106	89	417	424	584	601	1,001	1,025
Stanislaus	33	58	56	74	304	365	358	421	662	786
Sutter	8	2	8	6	55	55	45	47	100	102
Tehama	16	13	24	43	99	119	190	211	289	330
Trinity	1	2	6	8	13	16	24	25	37	41
Tulare	70	109	106	120	575	612	690	756	1,265	1,368
Tuolumne	11	9	11	21	68	62	107	130	175	192
Ventura	31	28	52	41	216	239	287	268	503	507
Yolo	22	23	26	34	146	155	194	228	340	383
Yuba	17	20	19	15	100	84	105	93	205	177
Totals	3,151	3,617	4,822	5,073	26,831	30,918	31,247	35,009	58,078	65,927

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TABLE No. 12.

Statistics of Secondary (High) Schools, showing state aid, total receipts and total expenditures for all purposes, for 1913 and 1914.

Counties	Total state aid		Total receipts from all sources, including state aid		Total expenditures	
	1913	1914	1913	1914	1913	1914
Alameda	$51,498 00	$51,528 96	$554,538 41	$505,657 19	$482,083 90	$476,051 29
Alpine						
Amador	3,154 25	3,673 36	64,448 60	48,883 56	51,845 67	42,573 13
Butte	7,194 25	7,793 36	52,805 14	70,089 13	38,489 81	58,593 48
Calaveras	2,659 50	2,742 24	14,488 09	17,986 61	11,987 30	12,337 61
Colusa	5,069 00	6,515 60	64,075 90	60,482 27	43,261 05	43,586 69
Contra Costa	9,893 25	10,527 84	105,482 30	115,264 41	75,351 97	88,309 36
Del Norte	1,554 75	1,591 12	11,916 80	13,704 25	8,248 13	9,326 59
El Dorado	1,774 75	1,841 12	13,120 48	15,766 45	9,788 63	14,304 97
Fresno	22,452 25	25,293 44	280,062 38	357,896 01	217,228 47	244,661 19
Glenn	2,929 50	3,072 24	64,807 11	126,753 60	19,761 93	48,655 44
Humboldt	8,329 00	8,754 48	61,738 06	215,454 65	45,605 32	88,587 49
Imperial	6,703 75	7,495 60	185,558 54	210,527 18	136,787 10	141,489 87
Inyo	2,689 50	2,822 24	21,477 27	24,444 12	15,216 66	15,137 40
Kern	5,109 50	5,302 24	105,980 84	81,594 28	99,544 70	74,173 08
Kings	3,639 50	4,923 36	49,460 15	57,350 21	37,713 94	38,647 55
Lake	1,684 75	1,801 12	10,985 55	12,259 67	7,479 37	8,288 90
Lassen	1,374 75	1,461 12	15,913 55	14,728 38	10,446 73	10,045 42
Los Angeles	141,396 75	160,750 32	3,545,220 92	3,702,010 44	2,675,648 91	2,942,386 61
Madera	1,654 75	1,751 12	13,658 47	16,147 58	10,377 01	12,810 71
Marin	4,679 50	6,073 36	46,233 86	49,932 43	41,720 38	44,516 72
Mariposa						
Mendocino	7,788 50	9,377 84	66,271 82	73,816 92	42,984 15	45,110 10
Merced	6,123 75	6,925 60	88,852 52	119,984 78	72,033 18	62,743 71
Modoc	2,469 50	2,632 24	19,943 81	21,684 30	16,599 56	16,928 89
Mono						
Monterey	7,603 75	8,435 60	107,125 26	134,800 73	90,684 83	103,486 27
Napa	4,019 50	5,423 36	63,579 30	47,420 20	55,098 73	35,783 36
Nevada	4,684 25	5,013 36	23,143 67	47,688 64	19,507 44	46,910 24
Orange	14,303 75	16,085 60	611,239 94	370,009 85	447,213 92	355,191 88
Placer	3,319 50	5,013 36	12,277 75	50,786 31	34,007 02	41,091 33
Plumas	1,114 75	1,031 12	48,695 96	51,207 24	5,790 20	48,933 45
Riverside	15,782 75	18,301 20	179,780 84	196,796 87	133,301 22	140,819 78
Sacramento	11,734 25	13,894 48	252,424 70	218,929 21	143,432 63	187,956 14
San Benito	2,134 75	2,201 12	13,531 79	13,641 95	13,449 08	13,445 65
San Bernardino	17,158 50	19,546 72	375,522 13	540,089 05	309,027 56	178,225 77

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San Diego	19,468 00	23,300 08	448,411 52	395,156 80	352,299 87	344,213 98
San Francisco	28,533 75	38,866 72	651,603 66	479,577 05	651,603 66	479,577 05
San Joaquin	8,914 25	10,534 48	229,609 78	279,633 88	138,874 97	221,825 96
San Luis Obispo	4,614 25	5,013 36	47,747 69	36,339 68	38,052 19	32,257 14
San Mateo	4,974 25	5,273 36	75,714 77	87,937 25	49,437 13	63,629 35
Santa Barbara	8,389 00	8,674 48	82,610 34	89,989 20	71,194 85	79,923 66
Santa Clara	24,678 00	25,388 96	250,205 78	223,385 11	221,106 17	209,635 54
Santa Cruz	7,544 25	7,843 36	58,992 55	71,553 46	52,581 87	62,017 34
Shasta	4,274 25	4,533 36	39,433 55	44,687 07	28,770 44	33,553 47
Sierra	1,084 75	1,081 12	3,433 67	6,527 80	3,412 16	6,100 01
Siskiyou	4,084 25	4,343 36	31,521 66	52,693 36	27,420 39	48,582 60
Solano	8,483 75	9,956 72	90,741 83	169,052 85	62,562 28	103,347 75
Sonoma	12,978 50	13,206 72	180,331 49	108,888 32	156,989 64	81,492 65
Stanislaus	9,888 50	11,747 84	108,963 18	215,701 33	72,971 14	95,876 38
Sutter	1,444 75	1,691 12	32,054 07	11,002 68	27,344 14	7,924 07
Tehama	3,619 50	4,172 24	71,938 96	31,719 01	68,529 87	27,952 35
Trinity	1,124 75	1,181 12	7,954 22	7,991 29	5,999 84	6,173 26
Tulare	15,183 25	16,297 84	251,883 68	168,403 07	231,224 54	139,640 33
Tuolumne	3,069 50	3,292 24	50,503 60	28,931 14	39,907 24	24,076 00
Ventura	8,473 75	8,575 60	144,166 83	191,352 27	98,975 29	98,284 42
Yolo	5,174 25	5,693 36	141,106 37	99,314 82	83,559 16	87,931 50
Yuba	3,309 50	3,432 24	25,274 25	26,662 54	21,312 99	24,643 86
Totals	$572,967 75	$642,815 52	$10,198,565 41	$10,430,288 45	$7,925,946 75	$7,969,768 74

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TABLE No. 13.

Statistics of Secondary (High) Schools, showing valuation of property, average annual salary paid teachers, and average tax rate for support of high schools.

Counties	Total valuation of all property		Average annual salary paid teachers			
			1913		1914	
	1913	1914	Men	Women	Men	Women
Alameda	$1,424,024 00	$1,530,174 00	$1,797 94	$1,363 70	$1,753 40	$1,394 35
Alpine						
Amador	45,909 00	70,275 00	1,462 50	1,085 71	1,500 00	1,051 00
Butte	104,700 00	112,235 00	1,522 75	946 15	1,450 01	1,046 48
Calaveras	9,220 00	9,220 00	1,533 00	1,072 00	1,500 00	1,100 00
Colusa	100,517 00	103,254 00	1,568 75	1,178 00	1,606 25	1,119 37
Contra Costa	224,794 00	242,769 00	1,610 90	1,004 00	1,565 96	1,117 67
Del Norte	19,000 00	18,400 00	1,920 00	1,067 55	1,750 00	1,000 00
El Dorado	27,000 00	30,000 00	1,500 00	1,000 00	1,500 00	1,150 00
Fresno	493,204 00	523,755 00	1,461 90	1,154 52	1,516 59	1,176 95
Glenn	26,070 00	53,700 00	1,441 67	955 56	1,771 75	1,000 00
Humboldt	39,050 00	65,400 00	1,508 00	926 00	1,465 70	1,034 52
Imperial	270,746 00	342,979 00	1,553 23	1,019 76	1,590 47	1,140 60
Inyo	18,750 00	23,550 00	1,558 33	1,108 33	1,740 00	1,097 50
Kern	193,600 00	210,800 00	1,411 54	990 00	1,483 30	1,075 00
Kings	86,100 00	88,825 00	1,542 00	1,154 00	1,550 00	1,182 00
Lake	2,950 00	3,000 00	1,500 00	1,066 66	1,550 00	1,100 00
Lassen	37,500 00	37,500 00	1,100 33	935 62	1,840 00	1,080 00
Los Angeles	5,098,656 00	5,741,850 00	1,642 94	1,387 83	1,621 87	1,415 92
Madera	42,400 00	62,000 00	1,600 00	1,200 00	1,080 01	1,050 00
Marin	89,950 00	98,400 00	1,768 75	979 23	1,621 00	1,088 00
Mariposa						
Mendocino	97,004 00	94,750 00	1,382 72	1,055 78	1,409 09	1,163 86
Merced	151,713 00	162,025 00	1,515 00	1,106 66	1,628 18	1,123 50
Modoc	69,050 00	70,250 00	1,733 33	1,035 71	1,585 00	925 00
Mono						
Monterey	147,875 00	148,500 00	1,374 68	990 12	1,656 96	1,078 60
Napa	92,550 00	95,400 00	1,343 25	1,124 43	1,491 42	897 50
Nevada	45,950 00	43,750 00	1,431 66	895 70	1,841 16	928 62
Orange	653,770 00	863,000 00	1,402 61	1,148 33	1,528 61	942 35
Placer	88,569 00	91,150 00	1,785 00	1,018 97	1,422 22	1,140 66
Plumas	1,200 00	43,553 00	1,416 66		1,450 00	1,200 00
Riverside	563,341 00	553,120 00	1,445 00	998 00	1,312 00	1,050 00
Sacramento	457,865 00	534,411 00	1,297 53	1,245 21	1,500 00	1,328 50

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San Benito	60,000 00	62,500 00	1,425 00	1,283 33	1,200 00	1,216 66
San Bernardino	703,240 00	704,845 00	1,385 01	1,227 69	1,186 65	1,034 12
San Diego	727,410 00	742,060 00	1,367 81	913 09	1,527 00	1,234 00
San Francisco	2,104,140 00	2,403,781 00	1,531 47	1,601 81	1,504 59	1,615 84
San Joaquin	392,286 00	508,210 00	1,785 00	1,320 00	1,770 78	1,258 00
San Luis Obispo	90,100 00	90,200 00	1,523 45	955 56	1,506 66	1,219 43
San Mateo	374,840 00	379,765 00	1,718 75	1,267 30	1,705 50	1,275 97
Santa Barbara	199,700 00	213,300 00	1,509 95	950 30	1,433 50	1,162 36
Santa Clara	482,360 00	501,568 00	1,615 85	1,194 26	1,608 73	1,206 45
Santa Cruz	139,700 00	68,800 00	1,378 33	1,129 43	1,198 00	1,150 00
Shasta	65,865 00	77,975 00	1,600 00	1,113 75	1,630 00	1,078 75
Sierra	650 00	2,200 00	1,600 00	1,100 00	1,775 00	1,200 00
Siskiyou	33,148 00	60,161 00	1,640 00	1,200 00	1,620 00	1,163 15
Solano	142,250 00	146,020 00	1,772 50	1,153 41	1,580 00	1,181 50
Sonoma	218,975 00	225,500 00	1,442 18	1,010 15	1,530 95	1,054 43
Stanislaus	193,530 00	193,018 00	1,381 50	1,094 45	1,421 00	1,056 00
Sutter	26,100 00	26,300 00	1,425 00	890 83	1,475 00	1,106 66
Tehama	90,500 00	92,100 00	1,757 50	1,029 75	1,459 17	1,121 75
Trinity	9,250 00	9,550 00	1,175 00	1,000 00	1,300 00	1,000 00
Tulare	277,175 00	299,650 00	1,427 20	1,150 22	1,380 65	1,072 44
Tuolumne	99,000 00	99,200 00	1,500 00	1,111 00	1,500 00	1,100 00
Ventura	250,750 00	237,540 00	1,683 33	1,208 33	1,749 29	1,157 88
Yolo	118,650 00	137,625 00	1,633 33	1,072 17	1,341 00	1,083 00
Yuba	62,950 00	62,750 00	1,675 00	914 30	1,625 00	1,142 00
Totals	$17,585,601 00	$19,412,613 00	*$1,528 82	*$1,074 63	*$1,517 52	*$1,125 00

*Average.

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TABLE 13a.

Statistics of Secondary (High) Schools, showing tax rate for maintenance and for buildings, amount of outstanding bonds issued by districts and rate of interest on bonds.

Counties	Average tax rate for maintenance		Average tax rate for building, 1914	Total outstanding bonds, 1914	Rate of interest paid on bonds, 1914
	1913	1914			
Alameda	.212	.22	.53	$334,000 00	5
Alpine					
Amador	.49	.33	.30	25,000 00	
Butte	.3233	.385	.06	5,000 00	5
Calaveras	.40	.25			
Colusa	.42	.33		49,500 00	5
Contra Costa	.27	.261		95,500 00	4.6
Del Norte	16	.17			
El Dorado	.14	.18			
Fresno	.42	.417		118,500 00	5.3
Glenn	.11	.15		90,000 00	5.5
Humboldt	.40	.433		154,000 00	5
Imperial	.71	.59		260,000 00	6
Inyo	.56	.56		11,500 00	7
Kern	.343	.277	.12	50,000 00	6
Kings	.41	.48		45,000 00	5
Lake	.22	.22			
Lassen	.16	.16			
Los Angeles	.668	.41		3,920,500 00	5
Madera	.11	.11			
Marin	.31	.306		50,000 00	5
Mariposa					
Mendocino	.34	.26		13,800 00	5
Merced	.32	.325		36,000 00	5
Modoc	.395	.252			
Mono					
Monterey	.32	.32	.18	29,000 00	5
Napa	.33	.38		51,500 00	5
Nevada	.25	.283	.25	27,750 00	5
Orange	.77	.65			
Placer	.47	.43	.07	16,000 00	5
Plumas	.475	.12			
Riverside	.542	.51		468,000 00	5
Sacramento	.43	.27		148,000 00	5.2
San Benito	.15	.15		24,000 00	4.5
San Bernardino	.533	.466		617,500 00	5
San Diego	.415	.60		393,750 00	5.3
San Francisco	.049	.44		275,000 00	4.5
San Joaquin	.137	.27			
San Luis Obispo	.51	.475		30,000 00	5
San Mateo	.22	.25		217,000 00	4.9
Santa Barbara	.275	.31		20,000 00	5.5
Santa Clara	.345	.398	.108	265,750 00	5
Santa Cruz	.523	.38		160,000 00	5
Shasta	.197	.282			
Sierra	.10	.25			
Siskiyou	.29	.25	.55		
Solano	.314	.35		124,000 00	5
Sonoma	.30	.286		107,500 00	5
Stanislaus	.47	.47		125,700 00	5
Sutter	.15	.10	.05	18,000 00	5
Tehama	.166	.26	.04	64,000 00	4.75
Trinity	.15	.16			
Tulare	.599	.675	.114	169,000 00	5.3
Tuolumne	.49	.115		9,000 00	5
Ventura	.462	.39	.11	192,000 00	5
Yolo	.2825	.353	.18	86,000 00	5
Yuba	.375	.473	.475	41,000 00	6
Totals	*.3238	*.305	*.18	$8,937,750 00	*5+%

*Average.

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TABLE No. 14.

Statistics of Secondary (High) Schools, showing average daily attendance, number of graduates, and percentage of graduates on enrollment in fourth year.

County	Average daily attendance		Number of graduates				Percentage of graduates on enrollment in fourth year	
			1913		1914			
	1913	1914	Boys	Girls	Boys	Girls	1913	1914
Alameda	4,458	4,762	283	405	306	426	85	90
Alpine								
Amador	106	144	3	2	2	7	71	90
Butte	518	603	39	52	43	68	84	96
Calaveras	100	107	7	9	9	10	†160	76
Colusa	188	196	11	16	8	21	†117	81
Contra Costa	443	540	36	35	27	60	94	86
Del Norte	72	72	7	10	6	14	81	80
El Dorado	97	103	6	12	5	11	95	88
Fresno	1,431	1,773	93	134	82	144	78	72
Glenn	155	159	16	18	5	15	†106	91
Humboldt	527	596	36	60	36	60	92	91
Imperial	314	442	14	33	21	41	†107	85
Inyo	108	113	7	15	5	5	75	77
Kern	352	426	15	23	20	45	64	73
Kings	238	272	14	14	10	27	†122	76
Lake	93	96	7	13	8	12	†105	91
Lassen	59	41	8	9	3	6	106	*180
Los Angeles	12,939	15,030	759	1,151	943	1,205	78	76
Madera	88	89	7	14	1	8	†105	*112
Marin	346	368	15	36	26	33	76	85
Mariposa								
Mendocino	328	360	19	31	19	31	93	77
Merced	257	301	11	28	11	33	†105	86
Modoc	89	109	4	8	7	13	86	78
Mono								
Monterey	408	422	27	37	17	36	82	70
Napa	281	351	14	23	28	27	79	82
Nevada	240	285	17	14	17	37	†128	*125
Orange	1,173	1,409	75	97	99	117	65	80
Placer	240	263	14	12	15	30	84	95
Plumas	16	27			2			100
Riverside	959	1,026	59	83	71	91	81	76
Sacramento	1,043	1,292	50	82	74	116	68	92
San Benito	133	143	12	16	17	26	100	*143
San Bernardino	1,342	1,410	93	134	104	139	83	88
San Diego	1,546	1,836	89	101	102	137	73	89
San Francisco	3,364	3,642	229	330	297	388	†144	*165
San Joaquin	705	805	41	64	52	73	87	84
San Luis Obispo	240	243	12	31	20	32	84	93
San Mateo	266	307	11	24	19	27	68	84
Santa Barbara	519	564	36	60	39	54	69	74
Santa Clara	1,842	1,871	128	213	110	231	53	86
Santa Cruz	523	592	22	50	14	56	92	83
Shasta	192	206	14	19	9	15	75	71
Sierra	21	19		2		1	100	50
Siskiyou	173	181	10	19	20	12	96	97
Solano	487	497	23	38	26	51	71	83
Sonoma	798	859	37	99	47	80	91	86
Stanislaus	565	668	27	55	43	69	92	85
Sutter	82	88	8	8	2	5	100	88
Tehama	243	290	14	21	12	42	87	96
Trinity	31	33	1	6	2	7	100	90
Tulare	1,070	1,190	53	93	90	102	83	84
Tuolumne	155	162	11	11	3	16	100	63
Ventura	422	435	28	41	22	34	83	81
Yolo	298	332	23	29	25	35	†168	105
Yuba	169	162	11	11	18	14	61	92
Totals	42,852	48,312	2,606	3,951	3,079	4,398	†82	Av. 86

*In many high schools a commercial course is given which, in most instances, closes at end of second year. These graduates have been included, hence high percentage on enrollment in fourth year.

†Averages.

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TABLE No. 15.

II. GENERAL SUMMARIES: 1851-1914.

Statement, by years, showing the amount of receipts and expenditures for Public, Primary, Grammar, High and Kindergarten Schools of the State of California, from 1851 to 1914, inclusive.

Years	Total amount of state school fund apportioned	Total amount raised by county and city taxes	Total amount raised from miscellaneous sources	Amount paid for salaries of teachers	Amount paid for repairs, fuel, and contingent expenses	Amount paid for libraries	Amount paid for apparatus	Amount paid for sites, buildings, and furniture	Total expenditures
1851				*	*	*	*	*	*
1852			$2,417 00	$21,355 42	$2,000 00	*	*	$4,748 32	$28,103 74
1853			10,626 00	30,215 00	10,525 00	*	*	13,491 01	54,231 01
1854	$52,061 00	$157,702 00	42,557 00	85,860 33	31,156 45	$3,990 52	*	151,822 52	272,829 82
1855	63,662 00	119,128 00	39,395 00	166,018 45	32,631 07	1,054 57	*	77,197 62	276,931 71
1856	69,961 00	121,639 00	28,619 00	200,941 00	49,668 84	2,127 16	*	52,484 00	305,221 00
1857	78,057 00	148,989 00	55,035 00	192,613 00	52,533 44	2,942 56	*	59,743 00	307,832 00
1858	53,105 00	162,870 00	85,107 00	203,276 37	45,395 92	3,042 78	*	88,199 70	339,914 77
1859	72,319 00	205,196 00	97,534 00	264,972 37	69,396 38	2,368 58	*	90,266 42	427,003 75
1860	81,118 00	230,514 00	122,858 00	311,165 38	50,989 41	1,756 09	*	110,352 86	474,263 74
1861	81,461 00	241,861 00	114,397 00	311,501 91	54,493 95	2,299 28	*	101,818 38	470,113 56
1862	75,412 00	294,828 00	141,806 00	330,249 02	59,479 76	2,225 57	*	49,274 62	441,228 97
1863	145,537 00	328,554 00	68,209 00	328,338 02	58,271 97	594 75	$2,271 22	93,931 53	483,407 49
1864	132,217 00	260,842 00	84,084 00	411,101 01	69,562 36	1,132 21	6,010 84	167,393 44	655,199 86
1865	168,828 00	390,306 00	91,181 00	526,585 14	89,056 57	5,792 01	3,777 86	257,804 98	883,016 56
1866	132,110 00	470,668 00	79,600 00	551,462 02	116,577 47	2,074 81	4,059 47	185,056 42	859,230 19
1867	268,910 00	595,718 00	81,066 00	696,110 28	206,412 25	10,125 01	5,431 83	238,070 64	1,156,150 01
1868	252,603 00	654,738 00	73,986 00	763,639 15	143,518 56	19,069 56	4,061 72	221,118 43	1,151,407 42
1869	290,796 00	847,229 00	66,531 00	873,814 07	185,672 91	20,415 76	4,915 83	205,766 95	1,290,585 52
1870	360,117 00	839,756 00	63,441 00	976,937 75	179,070 23	29,984 22	3,692 27	339,362 37	1,529,046 84
1871	423,853 00	923,809 00	46,660 00	1,103,125 14	289,691 57	26,766 30	3,689 46	390,158 50	1,713,430 97
1872	424,022 00	1,249,943 00	232,075 00	1,282,799 15	277,900 99	25,793 54	4,720 13	290,119 01	1,881,332 82
1873	430,220 00	1,541,597 00	310,502 00	1,434,366 93	275,674 70	24,879 48	4,365 70	374,069 44	2,113,356 25
1874	428,414 12	1,332,208 82	345,316 95	1,560,830 16	331,952 30	21,752 82	4,152 80	192,467 25	2,111,155 33
1875	1,212,252 03	1,115,530 06	676,259 64	1,810,479 62	381,806 62	33,962 72	10,713 02	421,279 36	2,658,241 34
1876	1,317,603 84	1,240,637 31	158,206 40	1,983,939 96	374,222 49	48,757 50	10,974 66	440,706 37	2,858,600 98
1877	1,474,600 26	1,486,233 73	137,100 31	2,149,435 70	378,754 50	55,148 64	18,964 19	147,426 43	2,749,729 46
1878	1,579,195 52	1,393,014 96	106,396 84	2,272,551 19	426,707 66	53,947 85	12,513 65	390,094 92	3,155,815 27
1879	1,423,941 75	1,446,852 04	92,852 41	2,285,732 39	371,992 13	46,490 50	13,565 73	293,126 38	3,010,907 13
1880	1,506,171 84	1,393,572 44	104,824 80	2,207,043 85	400,867 61	44,546 39	21,842 63	190,270 94	2,864,571 42
1881	1,790,457 62	1,343,306 02	32,048 79	2,346,056 58	401,572 56	79,432 10	15,694 04	204,849 66	3,047,604 94
1882	1,882,121 67	1,260,843 64	23,046 88	2,406,780 68	411,117 17	63,060 32	20,618 96	221,089 05	3,122,666 20
1883	1,890,724 20	1,315,818 96	32,462 71	2,511,078 40	419,760 85	61,032 26	26,504 11	293,839 66	3,312,215 28
1884	1,894,191 00	1,411,543 56	27,715 40	2,573,623 54	415,587 39	59,642 08	23,204 69	292,165 85	3,361,223 55

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1885	1,831,171	44	1,694,959	45	53,140	83	2,583,403	46	433,972	56	64,056	08	16,787	08	466,811	74	3,565,080	87
1886	1,890,733	32	1,690,704	86	138,596	48	2,710,621	82	422,843	30	64,627	32	24,833	01	283,006	18	3,505,931	63
1887	2,027,789	40	1,793,809	95	51,250	25	2,912,859	30	480,455	63	64,189	18	23,679	10	408,704	96	3,889,888	17
1888	2,168,686	08	2,170,058	19	259,554	55	3,083,027	24	527,035	55	58,229	04	31,534	85	621,554	82	4,321,381	50
1889	2,531,880	00	2,442,254	64	337,006	91	3,343,191	80	624,810	95	59,522	72	33,791	82	935,548	42	4,996,865	71
1890	2,635,716	10	2,293,335	75	98,092	22	3,594,588	98	706,995	12	71,121	94	42,442	85	703,947	79	5,119,096	68
1891	2,662,200	08	2,249,975	72	134,192	19	3,713,544	37	732,148	98	72,714	87	45,352	20	548,740	11	5,112,500	53
1892	2,354,786	00	2,464,706	04	266,455	77	3,874,346	88	750,929	32	72,961	08	45,424	77	608,229	27	5,351,891	32
1893	3,403,072	72	2,404,896	76	774,090	08	4,055,888	51	806,717	80	76,677	51	46,837	62	723,565	66	5,709,687	10
1894	2,770,661	84	2,388,359	31	337,815	12	4,005,721	80	752,757	68	61,890	04	30,130	55	574,293	10	5,424,793	17
1895	2,829,005	74	2,472,540	41	508,203	22	4,081,340	44	793,834	91	63,601	20	46,915	95	698,215	59	5,683,908	09
1896	3,043,884	60	2,517,827	78	256,021	31	4,291,481	12	899,861	54	71,249	23	35,492	78	503,674	80	5,801,759	47
1897	2,943,310	10	2,677,945	07	156,638	37	4,418,544	67	899,726	74	68,719	53	18,885	63	441,871	03	5,847,747	60
1898	3,106,072	72	2,684,416	96	364,030	62	4,582,625	71	1,010,710	13	72,975	97	16,693	40	494,899	39	6,177,904	60
1899	3,076,472	40	2,690,705	16	172,053	24	4,562,994	54	1,025,473	62	‡88,341	06	----------		397,793	15	6,074,602	37
1900	3,567,763	56	2,861,409	16	296,345	64	4,850,804	22	994,727	41	‡81,749	79	----------		268,157	32	6,195,438	74
1901	3,485,126	45	2,888,046	10	93,171	60	4,685,144	20	1,080,040	37	‡82,995	12	----------		525,050	16	6,373,229	85
1902	3,581,001	45	3,076,699	73	99,687	86	4,748,472	75	1,329,359	68	‡88,923	05	----------		439,305	94	6,606,061	42
1903	3,590,390	40	3,887,778	68	699,758	22	5,665,431	02	1,461,838	79	‡105,016	92	----------		937,879	47	8,170,166	20
1904	3,926,972	18	4,644,967	95	1,299,565	92	6,027,850	53	1,500,815	22	‡138,439	04	----------		1,734,359	36	9,401,464	15
1905	4,234,241	02	4,580,258	78	1,961,805	35	6,460,879	67	1,675,564	94	‡133,457	82	----------		1,408,100	86	9,678,003	29
1906	3,880,740	82	3,681,439	68	1,603,236	84	7,003,176	86	1,805,867	52	‡148,351	94	----------		1,983,163	70	10,940,560	02
1907	‡4,300,379	23	7,394,551	55	593,194	87	7,422,575	41	2,011,921	54	163,996	70	----------		2,620,211	24	12,218,704	89
1908	4,497,337	81	8,899,459	82	630,502	51	8,720,931	65	2,307,417	49	164,413	82	----------		3,229,940	91	14,423,703	87
1909	4,761,954	30	11,993,868	62	436,490	96	9,325,688	76	2,472,519	54	186,428	37	----------		4,000,619	07	15,985,255	74
1910	5,101,950	89	13,308,417	90	415,887	54	10,233,858	10	2,926,957	70	233,163	59	----------		4,536,538	36	17,930,517	75
1911	5,682,117	16	13,833,191	32	623,852	21	11,381,661	72	3,777,912	90	252,923	02	----------		4,958,430	18	20,370,927	82
1912	6,110,857	30	19,423,138	34	507,038	56	12,687,314	29	3,831,017	88	243,136	22	----------		7,217,152	22	23,978,620	61
1913	5,773,467	02	27,749,637	40	526,294	63	14,603,061	71	4,833,792	73	289,151	89	----------		5,828,913	03	25,554,419	36
1914	6,073,096	14	20,560,162	99	464,868	39	16,314,791	25	4,622,736	78	310,089	72	----------		5,332,285	92	26,579,903	62

*Not reported.
†Includes cost of apparatus. ‡Does not include balance on hand.

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TABLE No. 15—Concluded.

GENERAL.

Statistical Summary, by years, of the Kindergarten, Night, Primary and Grammar and High Schools of California, from 1851 to 1914, inclusive.

Years	Number of teachers	Number of children enrolled on school register	Average daily attendance
1851		1,846	
1852		3,314	
1853		4,193	2,020
1854	214	9,746	4,635
1855	301		6,442
1856	392		8,495
1857	486	17,232	9,717
1858	517	19,822	11,183
1859	714	23,519	13,364
1860	831	26,993	14,750
1861	932	31,786	17,804
1862	962	36,566	19,262
1863	919	36,540	19,932
1864	1,079	47,588	24,794
1865	1,155	50,089	29,582
1866	1,268	50,273	
1867	1,389	62,227	
1868	1,590	65,828	43,681
1869	1,687	73,754	49,802
1870	1,869	85,808	54,271
1871	2,052	91,332	64,286
1872	2,301	94,720	65,700
1873	2,336	107,593	69,461
1874	2,452	120,240	72,283
1875	2,693	130,930	78,027
1876	2,894	140,468	83,791
1877	3,077	147,863	89,539
1878	3,393	154,064	94,696
1879	3,453	156,769	98,468
1880	3,595	158,765	100,966
1881	3,737	163,855	105,541
1882	3,777	168,024	107,177
1883	3,930	174,611	112,594
1884	4,083	179,801	124,814
1885	4,242	184,001	116,028
1886	4,444	189,220	125,718
1887	4,888	196,907	129,297
1888	4,938	207,050	132,277
1889	5,255	215,905	143,783
1890	5,434	221,756	146,589
1891	5,659	229,986	153,599
1892	5,891	238,106	158,875
1893	6,136	232,501	157,673
1894	6,257	235,837	164,664
1895	6,589	241,322	170,861
1896	6,885	249,335	176,083
1897	7,190	247,061	180,209
1898	7,432	259,459	185,424
1899	7,366	265,364	195,540
1900	7,605	269,736	197,295
1901	7,810	258,977	188,730
1902	8,072	264,038	197,217
1903	8,333	288,776	212,884
1904	8,652	299,038	222,182
1905	9,026	315,226	239,491
1906	9,371	328,127	248,722
1907	9,714	335,645	247,880
1908	10,222	347,193	262,522
1909	10,747	352,278	275,272
1910	11,369	368,391	286,730
1911	12,156	386,911	302,657
1912	13,248	414,078	323,657
1913	14,524	446,916	346,443
1914	15,618	501,021	374,493

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INSTITUTION FOR THE DEAF AND THE BLIND.

TABLE No. 16. Enrollment, Number of Teachers, Receipts and Expenditures, Valuation of Property.

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CALIFORNIA SCHOOL FOR THE DEAF AND THE BLIND.

TABLE No. 16.

Showing Statistics California Institution for the Deaf and the Blind.

BERKELEY, CAL., *September 7, 1914.*

L. E. MILLIGAN, Principal.

The enrollment of pupils for the two years ending June 30, 1914, has been as follows:

Deaf boys	123	
Deaf girls	87	
		210
Blind boys	52	
Blind girls	42	
		94
Total both classes		304

The number of teachers, including manual craft instructors, has been:

Deaf Department.

Teachers, men	11	
Teachers, women	9	
		20

Blind Department.

Teachers, men	4	
Teachers, women	12	
		16
Total		36

RECEIPTS.

Appropriations for salaries and wages	$117,467 91
Appropriation for support	54,633 86
Total	$172,101 77

EXPENDITURES.

Salaries and wages	$117,467 91
Support	54,633 86
Total	$172,101 77

CONTINGENT FUND.

Balance on hand July 1, 1912	$1,204 45
Receipts	11,009 17
Total	$12,213 62
Expenditures	9,296 97
Balance July 1, 1914	$2,916 65

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VALUATION OF PROPERTY.

California School for the Deaf and the Blind.

BUILDINGS AND GROUNDS.

Land, 130 acres		$630,000 00
Buildings—		
Educational Building	$100,000 00	
Bartlett Hall	60,000 00	
Durham Hall	55,000 00	
Willard Hall	50,000 00	
Moss Hall	47,500 00	
Strauss Hall	47,500 00	
Refectory and other buildings	55,000 00	
Industrial Building	60,000 00	
		475,000 00
Water and machinery		35,000 00
Furniture		8,000 00
Total		$1,148,000 00

GIFTS AND BEQUESTS.

Pipe organ	$2,000 00	
Tower clock	1,393 00	
Library	3,000 00	
Hospital	10,500 00	
Loans	64,500 00	
Cash	5,691 71	
		87,084 71
Total		$1,235,084 71

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CALIFORNIA POLYTECHNIC SCHOOL.

TABLE No. 17. Number of Teachers, Number of Graduates, Receipts and Expenditures, Valuation of Property.

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CALIFORNIA POLYTECHNIC SCHOOL.

TABLE No. 17.

Statistics of California Polytechnic School, at San Luis Obispo, for 1913 and 1914.
By R. W. RYDER, Director.

			1913	1914
Number of teachers employed:				
Men			11	12
Women			4	5
Totals			15	17
Number of students enrolled, 1913:				
First year	boys 44	girls 12		
Second year	boys 34	girls 17		
Third year	boys 21	girls 8		
Special students	boys 26	girls 0		
Totals	125	37	162	
Number of students enrolled, 1914:				
First year	boys 60	girls 21		
Second year	boys 39	girls 9		
Third year	boys 24	girls 12		
Special students	boys 23	girls 6		
Totals	146	48		194
Number of graduates, 1913:				
Boys, 19; girls, 6			25	
Number of graduates, 1914:				
Boys, 21; girls, 12				33

FINANCIAL STATEMENT, 1913 AND 1914.

SALARIES.

Appropriation, biennial		$70,000 00
Balance	$30,264 31	
Administration	5,614 16	5,570 00
Faculty	24,649 90	24,890 04
Gardener, janitor, engineer, labor, etc.		4,539 00
Balance	25	3,500 96

GROUNDS.

Appropriation, biennial		$7,000 00
Balance	$3,136 73	
Expended	3,136 68	3,388 85
Balance	05	3,611 15

LIBRARY.

Appropriation, biennial		$1,500 00
Balance	$800 22	
Expended	800 02	635 25
Balance	20	864 75

PRINTING.

Appropriation, biennial	$1,200 00	*
Balance	600 69	
Expended	450 33	290 57
Balance	140 36	909 43

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TRUSTEES' EXPENSES.

Appropriation, biennial		*
Balance	$605 45	
Expended	474 51	
Balance	130 91	

CONTINGENT.

Deficit		$1,885 86
Receipt	$36,770 50	24,482 66
Expended	41,022 17	23,255 17
Balance from February 6, 1913	$2,365 73	$341 63

SPECIAL APPROPRIATIONS.

Furniture, Chapter 512-11.

Balance	$5,737 00	$3,390 60
Expenditure	2,346 40	2,756 29
Balance, July 1, 1914		$634 31

Shop and Laboratory Equipment, Chapter 229-11.

Balance	$2,184 49	$35 98
Expenditure	2,148 51	34 64
Balance, July 1, 1914		$1 34

Stock, Chapter 272-11.

Balance	$3,183 60	$3 80
Expenditure	3,179 80	
Balance, July 1, 1914		$3 80

Farm Implements, Chapter 273-11.

Balance	$1,380 84	$120 54
Expenditure	1,260 30	118 98
Balance, July 1, 1914		$1 56

Biennial Valuation of Property.

Area of ground, acres	311.04
Valuation of grounds, including water and sewer systems	$49,500 00
Value of buildings	139,000 00
Value of furniture	7,900 00
Value of library	3,200 00
Value of apparatus	43,600 00
Value of farm stock and tools	11,400 00
Total	$254,600 00

*Included in support.

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STATE NORMAL SCHOOLS.

TABLE No. 18. Number of Teachers, Students Enrolled, Receipts and Expenditures, Valuation of Property, Number of Volumes in Libraries, Number of Graduates.

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STATE NORMAL SCHOOLS.

TABLE No. 18.

Statistics of State Normal Schools.

TEACHERS EMPLOYED.

Name and location of school	Men		Women		Total	
	1913	1914	1913	1914	1913	1914
Chico	9	9	13	12	22	21
Fresno	8	7	8	7	16	14
Humboldt		3		2		5
Los Angeles	11	15	45	55	56	70
San Diego	8	8	23	18	31	26
San Francisco	9	6	16	22	25	28
San Jose	11	10	32	40	43	50
Santa Barbara	1	3	11	12	12	15
Totals	57	61	148	168	205	229

ENROLLMENT.

Normal Department.

Name and location of school	Men		Women		Total	
	1913	1914	1913	1914	1913	1914
Chico	62	51	268	263	330	314
Fresno	21	18	221	229	242	247
Humboldt		15		63		78
Los Angeles	36	33	1,184	1,362	1,220	1,395
San Diego	1	7	273	315	274	322
San Francisco			357	402	357	402
San Jose	44	55	872	921	916	976
Santa Barbara	25	26	195	234	220	260
Totals	189	205	3,370	3,789	3,559	3,994

Training Department.

Name and location of school	Men		Women		Total	
	1913	1914	1913	1914	1913	1914
Chico	177	172	188	192	365	364
Fresno		105		98		203
Humboldt						
Los Angeles	357	353	433	380	790	733
San Diego	181	182	219	222	400	404
San Francisco	378	341	388	303	766	644
San Jose	300	317	342	403	642	720
Santa Barbara						
Totals	1,393	1,470	1,570	1,598	2,963	3,068

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TABLE No. 18—Continued.

Statistics of State Normal Schools, showing receipts and expenditures for years ending June 30, 1913, and June 30, 1914.

RECEIPTS, 1913.

Name and location of school	Balance on hand July 1, 1912	Amount received from state appropriation	Amount received from tuition and other sources	Total receipts
Chico	$4,279 20	$51,150 00	$3,999 17	$59,428 37
Fresno	23,728 49		1,591 00	25,319 49
Humboldt				
Los Angeles	5,831 46	89,950 00	8,012 40	103,793 86
San Diego	784 05	45,950 00	121 95	46,856 00
San Francisco	2,749 86	38,200 00	10,279 07	51,228 93
San Jose	3,140 99	74,450 00		77,590 99
Santa Barbara	1,801 35	12,800 00	2,575 50	17,176 85
Totals	$42,315 40	$312,500 00	$26,579 09	$381,394 49

RECEIPTS, 1914.

Name and location of school	Balance on hand July 1, 1912	Amount received from state appropriation	Receipts from tuition and other sources	Total receipts
Chico	$2,668 14	$75,820 00	$3,486 55	$81,974 69
Fresno	5,955 74	425,000 00	1,412 50	432,368 24
Humboldt		10,000 00	7,248 27	17,248 27
Los Angeles	2,292 47	122,900 00	318 52	125,510 99
San Diego	101 28	71,750 00	407 42	72,258 70
San Francisco	2,244 14	49,650 00	10,826 77	62,720 91
San Jose	36 14	227,000 00		227,036 14
Santa Barbara		31,400 00	6,480 57	37,880 57
Totals	$13,297 91	$1,013,520 00	$30,180 60	$1,056,998 51

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TABLE No. 18—Continued.

EXPENDITURES, 1913.

Name and location of school	Amount paid for teachers' salaries	Amount paid gardeners, janitors, librarians, supplies, etc.	Amount paid for sites buildings and furniture	Amount paid for books and apparatus	Total expenditures	Balance on hand June 30, 1913
Chico	$33,945 50	$13,860 14	$1,273 84	$1,251 58	$50,331 06	$9,097 31
Fresno	13,600 00	1,653 20	3,347 27	768 28	19,363 75	5,955 74
Humboldt						
Los Angeles	86,823 45	7,974 83	2,805 55	2,997 62	100,601 45	3,192 41
San Diego	36,281 58	8,708 67		1,752 08	46,742 33	113 67
San Francisco	27,795 68	19,552 97	820 44	815 12	48,984 21	2,244 72
San Jose	63,640 22	8,058 54	3,643 04	2,212 63	77,554 43	36 56
Santa Barbara	11,360 02	4,557 27	1,000 00	174 45	17,091 74	85 11
Totals	$273,446 45	$64,366 62	$12,890 14	$9,366 76	$360,668 97	$20,725 52

EXPENDITURES, 1914.

Chico	$32,965 00	$10,588 91	$23,433 59	$816 56	$67,804 06	$14,170 63
Fresno	26,639 96	4,914 84	16,441 39	4,530 06	52,526 25	379,841 99
Humboldt	2,608 19	1,618 33	5,436 27	265 33	9,928 12	7,320 15
Los Angeles	100,519 50	10,037 28	812 86	3,224 54	114,594 18	10,916 81
San Diego	35,296 12	13,699 28	18,045 37	1,330 96	68,371 73	3,886 97
San Francisco	33,616 63	17,244 29	2,992 32	648 20	54,501 44	8,219 47
San Jose	75,725 94	8,281 17	30,890 22	2,151 66	117,048 99	109,987 15
Santa Barbara	19,859 00	10,956 13	500 00	300 00	31,615 13	6,265 44
Totals	$327,230 34	$77,340 23	$98,552 02	$13,267 31	$516,389 90	$540,608 61

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TABLE No. 18—Continued.

Statistics of State Normal Schools, showing valuation of property.

VALUATION OF PROPERTY, 1913.

Name and location of school	Area of grounds	Grounds	Buildings	Furniture	Libraries	Apparatus	Total
Chico	11	$60,000 00	$216,669 00	$10,232 00	$16,800 00	$9,704 00	$313,405 00
Fresno	10	20,000 00	500 00	89 00	500 00	276 00	21,365 00
Humboldt							
Los Angeles	10	550,000 00	50,000 00	9,000 00	17,500 00	3,500 00	630,000 00
San Diego	16.5	100,000 00	181,500 00	13,500 00	10,570 00	8,050 00	313,620 00
San Francisco	1.73	120,000 00	103,500 00	14,500 00	7,000 00	1,500 00	246,500 00
San Jose	18.3	50,000 00	422,000 00	30,000 00	16,500 00	10,000 00	528,500 00
Santa Barbara	4	21,000 00	109,000 00		2,200 00	150 00	132,350 00
Totals	71.53	$921,000 00	$1,083,169 00	$77,321 00	$71,070 00	$33,180 00	$2,185,740 00

VALUATION OF PROPERTY, 1914.

Chico	11	$65,000 00	$229,439 00	$12,461 00	$17,623 00	$10,553 00	$335,076 00
Fresno	25	37,000 00	11,000 00	4,500 00	1,000 00	2,500 00	56,000 00
Humboldt			3,291 00	2,144 00	265 00		5,700 00
Los Angeles	25	550,000 00	50,000 00	14,055 00	35,424 00	10,039 00	659,518 00
San Diego	16.5	100,000 00	183,250 00	14,500 00	11,500 00	8,260 00	317,510 00
San Francisco	8	120,000 00	103,500 00	14,500 00	7,500 00	1,500 00	247,000 00
San Jose	18.3	100,000 00	450,000 00	40,000 00	16,500 00	10,000 00	616,500 00
Santa Barbara	14	21,000 00	109,000 00	20,960 00	2,300 00	1,650 00	154,910 00
Totals	117.8	$993,000 00	$1,139,480 00	$123,120 00	$92,112 00	$44,502 00	$2,392,214 00

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TABLE No. 18—Continued.

Number of volumes in Normal School libraries.

Name and location of school	1913				1914			
	At beginning of year	Bought during year or donated	Lost or destroyed during year	Total at close of year	At beginning of year	Bought during year or donated	Lost or destroyed during year	Total at close of year
Chico	17,344	1,186	468	18,062	18,062	1,088	744	18,406
Fresno	174	270	12	432	432	693	5	1,120
Humboldt						1,029		1,029
Los Angeles	21,099	2,046	147	22,998	22,998	1,771	130	24,639
San Diego	10,810	1,576		12,386	12,386	1,188		13,574
San Francisco	11,705	1,370	995	12,080	12,080	4,555	1,648	14,987
San Jose	12,408	817	87	13,138	13,138	1,208		14,346
Santa Barbara	250	2,000	5	2,245	2,245	1,055	6	3,294
Totals	73,790	9,265	1,714	81,341	81,341	12,587	2,533	91,395

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TABLE No. 18—Concluded.

Number of Graduates of Normal Schools since organization.

Year	Chico (Organized 1889)			Fresno (Organized 1911)			Humboldt (Established 1913)			Los Angeles (Organized 1882)			San Diego (Organized 1897)			San Francisco (Organized 1899)			San Jose (Organized 1862)			Santa Barbara (Organized 1909)		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
1863																			0	4	4			
1864																			1	18	19			
1865																			4	19	23			
1866																			8	25	33			
1867																			4	27	31			
1868																			11	37	48			
1869																			3	26	29			
1870																			4	40	44			
1871																			4	17	21			
1872																			4	13	17			
1873																			4	16	20			
1874																			5	28	33			
1875																			9	36	45			
1876																			8	30	38			
1877																			6	36	42			
1878																			10	48	58			
1879																			8	36	44			
1880																			6	41	47			
1881																			2	32	34			
1882																			13	62	75			
1883																			14	79	93			
1884										3	19	22							16	72	88			
1885										6	29	35							13	96	109			
1886										11	32	43							18	82	100			
1887										4	44	48							11	87	98			
1888										4	31	35							18	103	121			
1889										10	47	57							17	112	129			
1890										8	41	49							14	142	156			
1891	3	14	17							9	62	71							8	96	104			
1892	6	18	24							6	72	78							10	99	109			
1893	5	27	32							11	80	91							5	131	136			
1894	3	27	30							11	65	76							10	124	134			
1895	3	49	52							12	72	84							8	148	156			
1896	9	35	44							10	55	65							13	153	166			

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1897	3	30	33							7	48	55							10	99	109			
1898	3	17	20							10	78	88							5	81	86			
1899	6	39	45							5	102	107							10	100	110			
1900	16	53	69							11	103	114	3	23	26				12	110	122			
1901	12	37	49							10	120	130	5	20	25	0	36	36	8	82	90			
1902	6	35	41							10	97	107	5	42	47	0	33	33	20	158	178			
1903	9	52	61							8	103	111	2	61	63	0	54	54	18	193	211			
1904	5	35	40							8	84	92	6	39	45	0	40	40	14	135	149			
1905	9	53	62							5	115	120	5	39	44	0	46	46	6	147	153			
1906	7	46	53							3	153	156	1	36	37	0	64	64	7	162	169			
1907	5	50	55							3	135	138	2	53	55	0	75	75	11	144	155			
1908	8	77	75							6	204	210	3	54	57	0	57	57	5	246	251			
1909	9	52	61							9	234	243	3	72	75	0	44	44	6	247	253			
1910	11	76	87							7	209	216		64	64	0	82	82	10	260	270	0	24	24
1911	8	41	49							11	383	394	4	55	59	0	93	93	9	263	272	1	29	30
1912	5	53	58	2	31	33				10	415	425	2	99	101	0	108	108	11	333	344	5	59	64
1913	17	77	94	9	106	115				14	498	512	1	93	94	0	148	148	16	377	393	11	71	82
1914	11	75	86	7	89	96				14	532	546	4	134	138	0	154	154	24	397	421	16	82	98
Totals	187	1,078	1,265	18	226	244				262	4,363	4,625	46	884	930	0	1,033	1,033	501	5,741	6,242	33	265	298

Total number of graduates:

Men	1,047
Women	13,590
Total	14,637

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UNIVERSITY OF CALIFORNIA.

TABLE No. 19. Number of Teachers, Students, Receipts and Expenditures, Valuation of Property.

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UNIVERSITY OF CALIFORNIA.

TABLE No. 19.

Statistics of University of California, showing number of professors, teachers and students, 1912-13, 1913-14.

By JAMES SUTTON, Recorder of the Faculties.

NUMBER OF PROFESSORS, LECTURERS AND INSTRUCTORS IN THE UNIVERSITY OF CALIFORNIA.

1912-13		1913-14	
Men	330	Men	358
Women	9	Women	12
Total	339	Total	370

ENROLLMENT OF STUDENTS.

Number of students enrolled in the—	1912-13 Graduate students	1912-13 Undergraduate students	1912-13 Total	1913-14 Graduate students	1913-14 Undergraduate students	1913-14 Total
Colleges of Letters, Social Sciences, and Natural Sciences:						
Men	243	1,030		250	1,260	
Women	285	1,529		280	1,735	
Totals	528	2,559	3,087	530	2,995	3,525
Colleges of Engineering and Chemistry:						
Men	40	734		46	811	
Women	3	0		5	3	
Totals	43	734	777	51	814	865
College of Commerce:						
Men	11	282		4	282	
Women	2	5		0	14	
Totals	13	287	300	4	296	300
College of Agriculture: Full courses—						
Men	31	429		21	524	
Women	7	26		3	28	
Totals	38	455	493	24	552	576
College of Agriculture: Short courses—						
Men	.....	158		.....	124	
Women	.....	29		.....	10	
Totals	.....	187	187	.....	134	134
College of Medicine: In Berkeley—						
Men	20	52		32	39	
Women	7	7		2	8	
Totals	27	59	86	34	47	91
In San Francisco—						
Men	13	4		13	11	
Women	3	0		7	0	
Totals	16	4	20	20	11	31
In Los Angeles—						
Men	4	3		2	1	
Women	0	0		0	0	
Totals	4	3	7	2	1	3

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Number of students enrolled in the—	1912-13 Graduate students	1912-13 Undergraduate students	1912-13 Total	1913-14 Graduate students	1913-14 Undergraduate students	1913-14 Total
College of Dentistry:						
Men		90			93	
Women		0			0	
Totals		90	90		93	93
College of Pharmacy:						
Men		95			113	
Women		3			4	
Totals		98	98		117	117
Hastings College of the Law:						
Men	25	75		31	57	
Women	0	0		0	0	
Totals	25	75	100	31	57	88
San Francisco Institute of Art:						
Men		92			88	
Women		133			113	
Totals		225	225		201	201
Grand totals			5,470			6,024

SUMMER SESSIONS.

	1912-13	1913-14
Men	470	783
Women	1,805	1,580
Totals	2,275	2,363
Total number of students, deducting duplicates	7,265	7,808

GRADUATED DURING THE YEAR.

	1912-13	1913-14
Men	490	576
Women	266	319
Totals	756	895

Total number of graduates since establishment of the university, 11,185.

SUMMARY OF THE ADDITIONAL ENROLLMENT FIGURES.

	Students
Wilmerding Trade School	155
Agricultural Extension	9,000
University Extension	900
Correspondence courses	1,060
Farm School	211
Total	11,326

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SUMMARY OF INCOME.

Year ending June 30, 1913.

From investments	$240,799 17	
United States	80,000 00	
State of California	1,152,020 41	
		$1,472,819 58
Students' fees	$137,415 83	
Dental department	22,375 99	
Medical department	17,880 70	
University hospital	32,120 41	
Los Angeles medical department	1,920 93	
University extension	825 00	
Sale of agricultural produce, etc.	151,830 14	
Miscellaneous	21,214 69	
Receipts for concerts, etc.	884 42	
		386,468 11
Gifts for current use	$72,699 93	
Gifts for architectural expenses and for building work	53,915 00	
		126,614 93
Gifts of real estate and improvements	$10,075 00	
Gifts for endowments	1,109,271 90	
		$3,105,249 52

SUMMARY OF EXPENDITURES.

Year ending June 30, 1913.

Administration	$316,383 10	
Library	82,527 80	
Agriculture (excluding building operations appearing under that head)	398,997 10	
Other departments	627,663 67	
Miscellaneous	9,478 60	
		$1,435,050 19
Scholarships and prizes	$28,799 37	
Summer session	42,099 96	
Lick Observatory	26,026 41	
Medical department (including University hospital and Los Angeles medical department)	119,890 32	
		258,616 56
Musical and dramatic		1,743 06
Watershed lands: Purchase of lands in Strawberry Canyon		23 04
Building operations		398,264 75
Permanent building fund: Interest on moneys		21,946 62
Wilmerding Trade School		29,224 92
		$2,144,869 14

ASSETS, JUNE 30, 1913.

Real estate in Berkeley		$1,497,966 50
Buildings and improvements in Berkeley		3,247,244 81
Real estate and improvements not in Berkeley	$3,046,194 18	
Other real estate	32,582 66	
		3,078,776 84
Equipment		2,098,387 08
		$9,922,375 23

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SUMMARY OF INCOME.

Year ending June 30, 1914.

From investments	$239,278 06	
United States	80,000 00	
State of California	1,574,283 67	
		$1,893,561 73
Student fees	104,225 08	
Dental department	22,845 84	
Medical department	19,738 96	
		146,809 88
Sale of agricultural and other produce		204,573 36
Miscellaneous receipts		13,997 77
Gifts for current use	129,136 44	
Gifts for endowments	39,310 52	
		168,446 96
		$2,427,389 70

SUMMARY OF EXPENDITURES.

Administration	$321,406 27	
Library	88,100 36	
Agriculture (excluding building operation)	574,150 29	
Other departments	892,819 12	
Miscellaneous	1,260 98	
		1,877,737 02
Scholarships and prizes		32,143 50
Building operations		402,673 02
Wilmerding Trade School		29,638 25
		$2,342,191 79

ASSETS, JUNE 30, 1914.

Real estate in Berkeley		1,498,767 23
Buildings and improvements in Berkeley		3,373,594 16
Real estate and improvements not in Berkeley utilized for University purposes	3,066,971 59	
Other real estate	32,582 66	
		3,099,554 25
Equipment		2,164,087 45
		$10,136,003 09

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STATE TEXTBOOKS.

TABLE No. 20. Number of Textbooks Sold, and Amount of Money Secured as the Result of Such Sales; Number of Books Distributed Free, Cost of Free Textbooks and Distribution; General Review of Textbooks, Sales, etc.

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TABLE No. 20.

The following tables will show the number of textbooks sold, the number distributed free to the elementary schools, since January, 1913, the cost of the manufacture of the same and the cost of distributing the free textbooks and the amount of royalty paid textbook companies for the use of their plates in the manufacture of the books.

Number of textbooks sold to dealers, orphan asylums, private schools and individuals from July 1, 1912, to June 30, 1913, cost per book of manufacture, amount of money paid into state treasury from sale of books, etc.

Books	Number of books sold	Cost of manufacture	To school book fund	Royalty	To royalty fund	Price	Amount of sales
Primer	26,817	$.132	$3,539 84	$.048	$1,287 22	18 cents	$4,827 06
First Reader	23,107	.122	2,819 06	.048	1,109 13	17 cents	3,928 19
Second Reader	23,723	.1375	3,261 92	.0525	1,245 45	19 cents	4,507 37
Third Reader	20,628	.19	3,919 32	.06	1,237 68	25 cents	5,157 00
Fourth Reader	20,323	.21	4,267 83	.09	1,829 07	30 cents	6,096 90
Fifth Reader	14,543	.21	3,054 03	.09	1,308 87	30 cents	4,362 90
Speller—Book I	31,472	.145	4,563 46	.025	786 78	17 cents	5,350 24
Speller—Book II	18,773	.145	2,722 10	.025	469 31	17 cents	3,191 41
First Book in Arithmetic	25,252	.1775	4,482 25	.0525	1,325 71	23 cents	5,807 96
Advanced School Arithmetic	23,746	.19	4,511 74	.09	2,137 14	28 cents	6,648 88
English Lessons—Book I (old)	9,488	.17	1,612 96	.08	759 04	25 cents	2,372 00
English Lessons—Book II (old)	8,440	.23	1,941 20	.12	1,012 80	35 cents	2,954 00
Introductory History	10,751	.22	2,365 22	.15	1,612 65	37 cents	3,977 87
Brief School History	15,940	.43	6,854 20	.15	2,391 00	58 cents	9,245 20
Introductory Geography	23,079	.36	8,308 44	.09	2,077 11	45 cents	10,385 55
Advanced Geography	18,017	.50	9,008 50	.15	2,702 55	65 cents	11,711 05
Primer of Hygiene	18,247	.15	2,737 05	.06	1,094 82	21 cents	3,831 87
Civics	10,319	.255	2,631 37	.125	1,289 85	38 cents	3,921 22
Writing—Book I	28,170	.03	845 10	.01	281 70	4 cents	1,126 80
Writing—Book II	27,504	.03	825 12	.01	275 04	4 cents	1,100 16
Writing—Book III	26,421	.03	792 63	.01	264 21	4 cents	1,056 84
Writing—Book IV	22,599	.03	677 97	.01	225 99	4 cents	903 96
Writing—Book V	18,883	.03	566 49	.01	188 83	4 cents	755 32
English Lessons—Book I (new)	5,632	.1925	1,084 16	.0675	380 16	26 cents	1,464 32
English Lessons- Book II (new)	4,367	.22	960 74	.09	393 03	31 cents	1,353 77
Totals	476,241		$78,352 70		$27,685 14		$106,037 84

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TABLE No. 20—Continued.

Number of textbooks distributed free to the elementary schools of the state, cost per copy of royalty for use of plates and the amount paid on royalty for use of plates, from January 1, 1913, to June 30, 1913.

Books	Number of books distributed	Royalty	To royalty fund
Primer	20,653	.048	$991 34
First Reader	24,889	.048	1,194 67
Second Reader	17,863	.0525	937 81
Third Reader	16,735	.06	1,004 10
Fourth Reader	16,378	.09	1,474 02
Fifth Reader	14,543	.09	1,308 87
Speller—Book I	27,333	.025	683 32
Speller—Book II	18,130	.025	453 25
First Book in Arithmetic	25,548	.0525	1,341 26
Advanced School Arithmetic	21,946	.09	1,975 14
English Lessons—Book I	40,023	.0675	2,701 55
English Lessons—Book II	32,148	.09	2,893 32
Introductory History	12,305	.15	1,845 75
Brief School History	14,457	.15	2,168 55
Introductory Geography	12,867	.09	1,158 03
Advanced Geography	9,190	.15	1,378 50
Primer of Hygiene	20,429	.06	1,225 74
Civics	13,010	.125	1,501 25
Writing—Book I	25,043	.01	250 43
Writing—Book II	23,193	.01	231 93
Writing—Book III	25,174	.01	251 74
Writing—Book IV	23,625	.01	236 25
Writing—Book V	21,264	.01	212 64
English Lessons—Book I (old)	1,133	.08	90 64
English Lessons—Book II (old)	1,054	.12	126 48
Totals	478,933		$27,636 58

Cost of distribution of free state textbooks commencing January 1, 1913, and ending June 30, 1913, $2,787.24 (approximate).

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TABLE No. 20—Continued.

Number of books sold to orphan asylums from July 1, 1913, to February 28, 1914. At this date the price of the books was lowered, and the following table will show the sales at the lower price for the remainder of the year. (The state buys the books for orphan asylums and sends them out free.)

Books	Number of books sold	Cost of manufacture	To school book fund	Royalty	To royalty fund	Price	Amount of sales
Primer	170	$.132	$22 44	$.048	$8 16	18 cents	$30 60
First Reader	146	.122	17 81	.048	7 01	17 cents	24 82
Second Reader	152	.1375	20 90	.0525	7 98	19 cents	28 88
Third Reader	129	.19	24 51	.06	7 74	25 cents	32 25
Fourth Reader	159	.21	33 39	.09	14 31	30 cents	47 70
Fifth Reader	150	.21	31 50	.09	13 50	30 cents	45 00
Speller—Book I	266	.145	38 58	.025	6 64	17 cents	45 22
Speller—Book II	216	.145	31 33	.025	5 39	17 cents	36 72
First Book in Arithmetic	373	.1775	66 21	.0525	19 58	23 cents	85 79
Advanced School Arithmetic		.19		.09		28 cents	
English Lessons—Book I	374	.1925	72 01	.0675	25 23	26 cents	97 24
English Lessons—Book II	101	.22	22 22	.09	9 09	31 cents	31 31
Introductory History	221	.22	48 62	.15	33 15	37 cents	81 77
Brief School History	80	.43	34 40	.15	12 00	58 cents	46 40
Introductory Geography	341	.36	122 76	.09	30 69	45 cents	153 45
Advanced Geography	104	.50	52 00	.15	15 60	65 cents	67 60
Primer of Hygiene	80	.15	12 00	.06	4 80	21 cents	16 80
Civics	116	.255	29 58	.125	14 50	38 cents	44 08
Writing—Book I	435	.03	13 05	.01	4 35	4 cents	17 40
Writing—Book II	455	.03	13 65	.01	4 55	4 cents	18 20
Writing—Book III	493	.03	14 79	.01	4 93	4 cents	19 72
Writing—Book IV	587	.03	17 61	.01	5 87	4 cents	23 48
Writing—Book V	508	.03	15 24	.01	5 08	4 cents	20 32
English Lessons—Book I (old)	31	.17	5 27	.08	2 48	25 cents	7 75
Totals	5,687		$759 87		$262 63		$1,022 50

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TABLE No. 20—Continued.

Number of books sold from March 1, 1914, to June 30, 1914. These were sold to orphan asylums, dealers, private schools and individuals.

Books	Number of books sold	Cost of manufacture	To school book fund	Royalty	To royalty fund	Price	Amount of sales
Primer	680	$.102	$69 35	$.048	$32 65	15 cents	$102 00
First Reader	609	.102	62 12	.048	29 23	15 cents	91 35
Second Reader	594	.1275	75 74	.0525	31 18	18 cents	106 92
Third Reader	408	.13	53 04	06	24 48	19 cents	77 52
Fourth Reader	363	.15	54 45	09	32 67	24 cents	87 12
Fifth Reader	160	.15	24 00	.09	14 40	24 cents	38 40
Speller—Book I	566	.115	65 10	.025	14 14	14 cents	79 24
Speller—Book II	275	.115	31 64	.025	6 86	14 cents	38 50
First Book in Arithmetic	444	.1275	56 61	.0525	23 31	18 cents	79 92
Advanced School Arithmetic	281	.14	39 34	.09	25 29	23 cents	64 63
English Lessons—Book I	343	.1625	55 74	.0675	23 15	23 cents	78 89
English Lessons—Book II	239	.17	40 63	.09	21 52	26 cents	62 14
Introductory History	200	.16	32 00	.15	30 00	31 cents	62 00
Brief School History	190	.26	49 40	.15	28 50	41 cents	77 90
Introductory Geography	299	.23	68 77	.09	26 91	32 cents	95 68
Advanced Geography	27	.39	10 53	.15	4 05	54 cents	14 58
Primer of Hygiene	154	.12	18 48	.06	9 24	18 cents	27 72
Civics	121	.185	22 39	.125	15 12	31 cents	37 51
Writing—Book I	417	.03	12 51	.01	4 17	4 cents	16 68
Writing—Book II	403	.03	12 09	.01	4 03	4 cents	16 12
Writing—Book III	437	.03	13 11	.01	4 37	4 cents	17 48
Writing—Book IV	343	.03	10 29	.01	3 43	4 cents	13 72
Writing—Book V	276	.03	8 28	.01	2 76	4 cents	11 04
Totals	7,829		$885 61		$411 45		$1,297 06

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TABLE No. 20—Continued.

Number of books distributed free to the elementary schools of the state from July 1, 1913, to June 30, 1914, and the amount of royalty paid for the use of plates belonging to the textbooks companies.

Books	Number of books distributed	Royalty	To royalty fund
Primer	45,875	$.048	$2,202 01
First Reader	36,802	.048	1,766 50
Second Reader	45,809	.0525	2,404 97
Third Reader	44,126	.06	2,647 56
Fourth Reader	43,598	.09	3,923 82
Fifth Reader	36,828	.09	3,314 52
Speller—Book I	114,950	.025	2,873 74
Speller—Book II	71,514	.025	1,787 84
First Book in Arithmetic	97,182	.0525	5,102 06
Advanced School Arithmetic	78,867	.09	7,098 03
English Lessons—Book I	94,220	.0675	6,359 85
English Lessons—Book II	85,065	.09	7,655 85
Introductory History	42,927	.15	6,439 05
Brief School History	48,122	.15	7,218 30
Introductory Geography	70,884	.09	6,379 56
Advanced Geography	55,975	.15	8,396 25
Primer of Hygiene	42,670	.06	2,560 20
Civic	32,140	.125	4,017 49
Writing—Book I	57,722	.01	577 22
Writing—Book II	58,774	.01	587 74
Writing—Book III	63,306	.01	633 06
Writing—Book IV	57,700	.01	577 00
Writing—Book V	49,816	.01	498 16
English Lessons—Book I (old)	1,703	.08	136 64
English Lessons—Book II (old)	2,574	.12	308 88
Totals	1,379,154		$85,466 30

Cost of distribution of free state textbooks commencing July 1, 1913, and ending June 30, 1914, $7,583.35.

TABLE No. 20—Concluded.

Cost of manufacturing textbooks by months and the cost of labor in distributing the same.

1913.	
January	$5,040 58
February	5,379 26
March	6,021 77
April	8,145 32
May	13,533 61
June	10,255 62
Total	$48,376 16

1913.	
July	$10,954 35
August	7,796 21
September	9,986 27
October	13,077 05
November	8,238 04
December	9,682 75
1914.	
January	12,270 83
February	8,986 92
March	7,234 63
April	10,471 32
May	4,758 28
June	6,840 97
Total	$110,297 62

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SUMMARY OF TEXTBOOKS.

Sold and distributed free: 1887-1914.

Period	Number of books sold. Column (a)	Number of books distributed free. Column (b)	School book fund. Column (c)	Royalty fund. Column (d)	Amount Column (c)
Prior to July 1, 1904	4,052,327		$1,429,297 52	$10,821 75	$1,440,119 27
July 1, 1904, to June 30, 1906	857,749		310,105 09	87,471 36	395,272 38
July 1, 1906, to June 30, 1908	1,072,575		292,748 67	101,880 05	394,628 72
July 1, 1908, to June 30, 1910	1,178,594		247,944 36	75,859 56	323,803 92
July 1, 1910, to June 30, 1911	683,079		152,341 82	41,922 60	194,264 42
July 1, 1911, to June 30, 1912	683,527		159,113 15	42,100 08	201,213 23
July 1, 1912, to June 30, 1913	476,241	477,933	78,352 70	55,321 72	106,037 84
July 1, 1913, to June 30, 1914	13,526	1,379,154	1,645 48	86,140 38	2,319 56
Totals	9,017,618	1,857,087	$2,671,548 79	$501,517 50	$3,057,659 34

Columns (a) and (b) are self-explanatory.

Column (c) is the total amount of money paid into the school book fund as a result of the sale of books listed in column (a).

Column (d) is the amount of money paid to the textbook companies for the use of plates in the manufacture of all state textbooks. This includes both books sold and books distributed free.

Column (e) is the total amount of money paid into the state treasury as the result of sales, column (a).

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GENERAL STATISTICAL SUMMARY.

TABLE No. 21. Totals for 1913 and 1914 for Kindergarten Schools, Elementary Schools, Normal Schools. Recapitulation Showing Totals for All Schools.

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STATISTICAL SUMMARY.

TABLE No. 21.

Statistical Summaries, 1913-14.

(Kindergarten, Elementary, High and Normal Schools, and California Polytechnic School, and University of California.)

(1) Kindergarten Schools.

	1913	1914
Number of counties maintaining	13	13
Number of teachers employed (women)	317	355
Grade of certificates held by teachers—		
Kindergarten primary	290	323
Kindergarten special	27	32
Totals	317	355
Number of pupils enrolled—		
Boys	5,529	6,532
Girls	5,466	6,538
Totals	10,995	13,070

	1913	1914
Average daily attendance	5,707	6,937
Average number of days school was open	180	183
Annual salary paid teachers (average)	$868 26	$822 30
Number of school visits made by county superintendents	479	432
Number visits by school trustees	215	338
Number books in libraries	1,162	1,863

Financial Statement.

Receipts from—		
Balance on hand	$3,388 91	$650 75
Taxes of all kinds	274,676 30	319,502 00
Donations, etc.	1,304 00	----------
Total receipts	$279,369 21	$320,152 75
Expenditures for—		
Teachers salaries	$250,594 14	$298,264 23
Supplies, etc.	16,269 56	11,362 01
Buildings	11,157 42	2,390 76
Totals	$278,021 12	$312,017 00
Balance on hand in funds	1,348 09	8,079 92
Valuation of all property—		
Sites and buildings	$186,895 00	$98,451 00
Books and apparatus	21,833 00	6,029 00
Totals	$208,728 00	$104,480 00
Average tax rate for maintenance	----------	$.067
Cost per pupil per annum for teachers and supplies	$24 27	23 70
Schoolhouses—built of—		
Brick	4	2
Wood	47	37
Totals	51	39

Many of the kindergarten schools are held in the regular grammar school buildings. The results are that an estimate of buildings and valuation of property varies from year to year.

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TABLE No. 21—Continued.

Statistical Summaries, 1913-14.

(Kindergarten, Elementary, High and Normal Schools, and California Polytechnic School, and University of California.)

(2) Elementary (Primary and Grammar) Schools.

	1913	1914
Number of districts at beginning of year	3,349	3,374
Number organized	86	73
Number of suspended re-established	17	25
Number lapsed	28	17
Number suspended	45	36
Number combined	5	9
Total at close of year	3,374	3,410
Number of schoolhouses built of—		
Stone	25	8
Concrete	63	113
Brick	258	301
Wood	3,927	3,977
Totals	4,273	4,399
Number of teachers allowed on attendance	10,639	11,270
Number of teachers employed—		
Men	1,085	1,162
Women	10,468	11,104
Totals	11,553	12,266
Grade of certificates of teachers in Elementary schools—		
High school	483	515
Grammar	10,446	11,095
Primary	75	63
Special	549	593
Totals	11,553	12,265
Number of teachers attending institutes	11,208	11,764
Enrollment of pupils:		
First year—		
Boys	43,932	47,217
Girls	37,099	40,664
Second year—		
Boys	26,384	28,148
Girls	22,751	24,324
Third year—		
Boys	25,352	26,957
Girls	23,557	24,324
Fourth year—		
Boys	24,324	25,933
Girls	22,593	24,342
Fifth year—		
Boys	22,774	23,803
Girls	20,784	22,292
Sixth year—		
Boys	20,244	21,913
Girls	18,685	20,056
Seventh year—		
Boys	17,738	18,933
Girls	17,185	18,256
Eighth year—		
Boys	17,113	17,772
Girls	17,418	17,367
Total boys	197,861	210,676
Total girls	180,082	191,348
Grand total boys and girls	377,943	402,024

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TABLE No. 21—Continued.

	1913	1914
Number of graduates from grammar schools—		
Boys	10,381	11,878
Girls	11,523	12,902
Totals	21,904	24,780
Attendance, length of term, libraries, etc—		
Average daily attendance	297,884	319,244
Number of districts maintaining school—		
Less than 120 days for the year	27	13
Between 120 and 160 days	423	369
Between 160 and 200 days	2,611	2,764
Over 200 days	256	212
Total districts in which school was open	3,317	3,358
Average number of days schools were open	171—	172+
Average amount of money paid teachers per annum—		
Men	$1,021 63	$1,018 96
Women	732 02	744 91
Number of visits made by—		
County superintendents	20,101	22,461
School trustees	19,525	16,722
Number of books in school libraries	2,484,371	2,747,901
Number of books in county teachers' libraries (library of county superintendent)	59,805	52,530

NOTE.—In several counties the county library has absorbed the books in school libraries and the books in the teachers' libraries, as they can be bought and handled to better advantage in this way.

Financial Statement.

	1913	1914
Receipts from—		
Balance on hand	$4,476,584 63	$4,089,779 63
State apportionments	5,195,268 50	5,430,282 64
County apportionments	5,591,184 58	4,980,197 76
City or district (special) taxes	3,602,377 44	4,591,921 29
Sale of bonds	2,130,552 60	3,267,805 05
Miscellaneous sources	399,485 39	356,898 66
Total receipts	$21,395,453 14	$22,666,885 03
Expenditures for—		
Teachers' salaries	$10,694,708 07	$11,752,150 24
Contingent expenses, supplies, etc.	3,330,616 22	3,161,163 41
Buildings and furniture	3,174,592 79	3,224,588 31
Books and apparatus	151,034 43	160,011 03
Total expenditures	$17,350,951 51	$18,297,912 99
Balance on hand at close of year	4,044,502 63	4,368,972 04
Valuation of all school property—		
Sites and buildings, and furniture	$43,594,438 00	$47,510,510 00
Libraries	980,461 00	1,020,510 00
Apparatus	600,301 00	626,242 00
Total valuation	$45,175,200 00	$49,157,262 00
Average tax rate for county school purposes	$.255	$.264
Special tax levied by districts for—		
Maintenance (beyond county and state rates)	----------	.215
For building purposes	----------	$408 00
Total amount of outstanding bonds	----------	19,923,962 00
Average rate of interest paid on bonds		5.4%
Cost per pupil per annum for elementary schools, exclusive of cost of buildings	$37 51	$35 72
Average rate of apportionment per pupil on average daily attendance in addition to the $550 per teacher, as given out by the county superintendent in his yearly apportionment	16 23	16 61

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TABLE No. 21—Continued.

(3) High Schools.

	1913	1914
Number of counties maintaining	55	55
Number and kinds of—		
County	20	20
City	47	49
District	44	43
Union	119	127
Joint union	16	16
Totals	246	255
Number and kinds of school buildings—		
Stone	8	9
Concrete	42	64
Brick	96	109
Wood	117	111
Totals	263	293
Number and sex of teachers employed—		
Men	1,049	1,206
Women	1,595	1,791
Totals	2,644	2,997
Total number of students enrolled—		
First year—		
Boys	13,276	15,860
Girls	13,657	16,208
Second year—		
Boys	6,303	6,859
Girls	7,571	8,137
Third year—		
Boys	4,101	4,582
Girls	5,197	5,591
Fourth year—		
Boys	3,151	3,617
Girls	4,822	5,073
Total boys	26,831	30,918
Total girls	31,247	35,009
Grand total boys and girls	58,078	65,927
Graduates during year—		
Boys	2,606	3,079
Girls	3,951	4,398
Totals	6,557	7,477
Attendance, etc.—		
Average daily attendance	42,852	48,312
Average length of term (days)	187	187
Number of teachers attending institutes	2,547	2,885
Number of volumes in libraries	285,480	349,245

Financial Statement.

Receipts from—	1913	1914
Balance on hand	$2,844,015 17	$2,279,418 00
State apportionments	578,198 52	642,813 50
From district appropriations	4,985,682 74	5,506,429 22
Tax for buildings and sale of bonds	1,665,163 74	1,893,657 00
Donations, etc.	125,505 24	107,970 73
Total receipts	$10,198,565 41	$10,430,288 45

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TABLE No. 21—Continued.

	1913	1914
Expenditures for—		
Teachers' salaries	$3,657,759 50	$4,264,376 78
Contingent and supplies	1,486,906 97	1,450,006 42
Buildings	2,643,162 82	2,105,306 85
Books and apparatus	138,117 46	150,078 69
Totals	$7,925,946 75	$7,969,768 74
Balance on hand at close of year	2,272,618 66	2,460,519 71
Valuation of property—		
Sites and buildings	$16,662,546 00	$18,358,830 00
Of laboratories	536,260 00	628,650 00
Libraries	386,795 00	425,133 00
Totals	$17,585,601 00	$19,412,613 00
Average tax rate for maintenance	$.323	$.305
Average tax rate for buildings (special)	----------	.18
Total amount of bonds outstanding against the property of the district	----------	$8,882,250 00
Average rate of interest on bonds	----------	5+%
Average cost per pupil per annum for pupils enrolled in high schools, not including cost of buildings	$90 96	$88 95

General School Statistics.

Cost of teachers' institutes—		
For lecturers	$14,603 03	$18,467 07
For expenses, rent, etc.	4,759 33	4,497 55
Totals	$19,362 36	$22,964 62
Cost of trustees' institutes for—		
Lectures	----------	$1,393 20
Rent of halls, etc.	----------	2,515 38
Total	----------	$3,908 58
Number of certificates issued by county boards of education during the year:		
On examination to—		
Men	105	85
Women	460	535
Totals	565	620
On credentials to—		
Men	654	651
Women	3,495	3,456
Totals	4,149	4,107

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TABLE No. 21—Continued.

(4) Normal Schools.

	1913	1914
Number of State Normal Schools	7	8
Number of teachers employed in all Normals:		
Men	57	61
Women	148	168
Totals	205	229
Number of students enrolled:		
Normal department—		
Men	189	205
Women	3,370	3,789
Totals	3,559	3,994
Training department—		
Boys	1,393	1,470
Girls	1,570	1,598
Totals	2,963	3,068
Number of graduates for year—		
Men	68	76
Women	1,370	1,463
Totals	1,438	1,539
Total number of graduates by all Normal Schools since beginning—		
Men	971	1,047
Women	12,127	13,590
Totals	13,098	14,637

Financial Statement.

Receipts from—	1913	1914
Balance on hand	$42,315 40	$13,297 91
State appropriations	312,500 00	1,013,520 00
Tuition and other sources	26,579 09	30,180 60
Totals	$381,394 49	$1,056,998 51
Expenditures for—		
Teachers' salaries	$273,446 45	$327,230 34
Contingent	64,366 62	77,340 23
Sites, buildings, etc.	12,890 14	98,552 02
Books and apparatus	9,966 76	13,267 31
Totals	$360,668 97	$516,389 90
Balance on hand at close of year	20,725 52	540,608 61
Valuation of property—		
Sites	$921,000 00	$993,000 00
Buildings	1,083,169 00	1,139,480 00
Furniture	77,321 00	123,120 00
Libraries	71,070 00	92,112 00
Apparatus	33,180 00	44,502 00
Totals	$2,185,740 00	$2,392,214 00
Number of acres in Normal grounds, 81.53.		
Number of books in libraries—		
At beginning of year	73,790	81,341
Bought during year	9,265	12,587
Lost or destroyed	1,714	2,533
Totals	81,341	91,395

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TABLE No. 21—Concluded.

(5) Recapitulation.

	1913	1914
Number of school districts (elementary)	3,374	3,410
Number of high schools	246	255
Number of teachers employed in all public schools in the state—		
Kindergartens	317	355
Elementary schools	11,053	12,266
High schools	2,644	2,997
Normal schools	205	229
California Polytechnic School	15	17
Institution for the Deaf and the Blind	36	36
University of California	339	370
Totals	14,609	16,270
Number of students enrolled in all public schools—		
Kindergartens	10,995	13,070
Elementary schools	377,943	402,024
High schools	58,078	65,925
Normal schools	3,559	3,994
California Polytechnic Institute	162	194
Institution for the Deaf and the Blind	304	304
University of California	7,265	7,808
Totals	458,306	513,319
Receipts for—		
Kindergartens	$279,369 21	$320,152 75
Elementary schools	21,395,454 14	22,666,885 03
High schools	10,198,565 41	10,430,288 45
Normal schools	381,394 49	1,056,998 51
California Polytechnic School	41,000 00	41,000 00
Institution for the Deaf and the Blind	81,051 85	81,051 85
University of California	3,105,249 52	2,427,389 70
Totals	$35,482,084 62	$37,023,766 29
Expenditures for—		
Kindergartens	$278,021 12	$312,017 00
Elementary schools	17,350,951 51	18,297,912 99
High schools	7,925,946 75	7,969,768 74
Normal schools	360,368 97	516,389 90
California Polytechnic School	40,895 00	40,895 00
Institution for the Deaf and the Blind	80,050 00	80,050 00
University of California	2,144,869 14	2,342,191 79
Totals	$28,181,102 59	$29,559,225 42
Valuation of all property—		
Kindergartens	$208,128 00	$104,480 00
Elementary schools	45,175,200 00	49,157,277 00
High schools	17,585,601 00	19,412,613 00
Normal schools	2,185,740 00	2,392,214 00
California Polytechnic School	254,300 00	254,300 00
Institution for the Deaf and the Blind	1,235,084 00	1,235,084 00
University of California	9,922,375 00	10,136,003 00
Totals	$76,566,428 00	$82,691,971 00
Number of books in all school libraries—		
Kindergartens	1,162	1,863
Elementary schools	2,484,371	2,747,901
High schools	285,480	349,245
Normal schools	81,341	91,395
*California Polytechnic School	----------	----------
*Institution for the Deaf and the Blind	----------	----------
University of California	259,739	282,072
Totals	3,112,093	3,472,476

*No report made.

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Second Biennial Report

THE NEW YORK PUBLIC LIBRARY
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OF THE

State Board of Education

State of California

1914-1916

CALIFORNIA STATE PRINTING OFFICE
SACRAMENTO
1916

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OF THE

State Board of Education

State of California

1914-1916



CALIFORNIA STATE PRINTING OFFICE
SACRAMENTO
1916

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PART I.

LETTER OF TRANSMITTAL AND REPORT OF THE PRESIDENT.

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LETTER OF TRANSMITTAL.

SACRAMENTO, October 18, 1916.

The State Board of Education has the honor to submit to His Excellency, Hiram W. Johnson, Governor of California, in accordance with section 1519 of the Political Code, its second biennial report.

The report contains, in addition to a résumé of the activities of the board, the reports of the various committees of the board, the reports of the commissioners and the Superintendent of Public Instruction, and the report of the Public School Teachers' Retirement Salary Fund Board.

Respectfully submitted.

STATE BOARD OF EDUCATION,
By EDWARD HYATT, Secretary.

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REPORT OF THE PRESIDENT.

To His Excellency, GOVERNOR HIRAM W. JOHNSON.

We transmit herewith the biennial reports of the three Commissioners of Education to this board, the biennial report of the State Superintendent of Public Instruction, and the biennial reports of the various standing committees of the board. These will give a comprehensive and interesting review of the work of the state department of education for the past two years; and in this introductory statement it seems necessary, therefore, only to call attention to a few of the more important matters that have engaged our attention and to emphasize briefly some changes in the laws relating to educational matters which seem to us important for the most effective development of the schools of the state and the permanency of the retirement salary system.

TEXTBOOK ADOPTIONS.

One of the most important phases of the work of the State Board of Education for the biennial period now drawing to a close has been the adoption of new texts in reading, history and writing. In every instance, the adoptions were made only after a very careful and thorough examination by educational experts of the various books or manuscripts submitted; their work was reviewed by the commissioners of education and the state superintendent; and then after listening to all these reports and to the arguments of the representatives of the book companies, the board sat as a sort of court of last resort and made its decision. The new texts are having their first use in the schools for the present school year, and we are led to believe they are meeting with favor from the teachers generally as an improvement over anything the state has yet provided in these branches.

We are disposed in all modesty to point with some degree of pride to the fact that at the request of this board the Mace history which was adopted was revised in many important particulars; greater prominence was given to some of the more recent developments in the country's history; and the development of the west, the achievements of peace, and the work of some of the famous women in our history were given recognition. These changes have made the book a much more valuable one, not only for use in California but in the country at large.

A brief but graphic and valuable history of California is added as a supplement to this text. This was prepared by Professor Valentine of the San Francisco State Normal School and, in our judgment, is a

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most important contribution to the historical literature of the state; it should be a great aid in making the children of our schools familiar with the fascinating and inspiring story of the development of the Golden State.

The fourth and fifth readers were revised so as to provide more western material and to supply considerable material relating to rural life. The readers for the sixth, seventh and eighth grades were prepared by Leroy E. Armstrong, a California educator, and they give a much fuller recognition of the work of California authors than it would have been possible to secure in any standard series of readers published by an eastern house.

In all textbook adoptions the test of educational merit as determined by expert investigation has been the first one applied, but due consideration has also been given to the business side of the question; and, as a result of this, some of the contracts have been closed at figures which mean a great saving to the state throughout the life of the contract.

We desire, in this connection, to express our appreciation and pride in the promptness and efficiency with which the various texts adopted have been turned out by the state printing office and in the splendid typographical appearance which they present. These various books are a powerful argument in favor of state publication of the books for the elementary schools.

The contracts on other textbooks in the state series have expired or will expire in the near future, and we have taken steps to give to the problem of adoption in these texts the same exhaustive study that has characterized the adoptions made in the last year. Whether changes are made or the present texts continued under new contracts will depend on the best expert advice we can secure and on the question of cost as determined by the royalties and expense of printing.

HIGH SCHOOL TEXTBOOKS.

In response to quite a general demand for the publication and free distribution of high school textbooks by the state, a holdover legislative committee has been making an investigation of this important subject. This matter is reviewed in the report of Commissioner Wood. and we coincide in the views which he expresses. The matter of the purchase and distribution of the high school texts by the state or the various districts is a proposition worthy of careful consideration, but that is a problem apart from the one of state publication. Applying the tests of educational efficiency, of local opportunity for differentiation and of economy, it does not seem to us wise to recommend that the state launch the experiment of statewide uniformity and state publication of high school texts. The high school teachers of the state are prac-

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tically a unit in their opposition to state uniformity, on the ground that it would stifle initiative, prevent adaptation to local conditions and narrow the scope of high school work. The problem of state uniformity and state publication of high school texts is quite a different one from that of free textbooks for the elementary schools. Including the adoptions made during the past year, the number of separate textbooks furnished by the state for the elementary schools is only 22. Even if there were a uniform series of high school texts, it would require over 100 different textbooks, as 106 subjects are now taught in the high schools of the state. Even if a latitude of only two or three standard texts were allowed in high school subjects, it would involve the publication by the state of two or three hundred different books, many of them in small editions. It has not seemed to us that many of those who have been urging uniform and state published high school texts have realized this phase of the question.

We have, however, met the objections of those who have argued against the present multiplicity of texts for high school use by revising the list of approved textbooks and eliminating all texts not in use in at least five high schools of the state. We are making a study of the whole problem and may find that still further restriction of the list is possible without any sacrifice to educational standards or the opportunity for community specialization.

HIGH SCHOOL AND SPECIAL CREDENTIALS.

During the past two years, the state board has considered 564 applications for the State Board High School Credential and 349 have been issued. In view of the large number of high school teachers who are being annually graduated from the five-year course in the State university, Stanford and the University of Southern California and given credentials that authorize them to teach in any high school in the state, we feel that the high standards for the State Board High School Credential which have been maintained in this state for many years should be rigidly adhered to. It is true, however, that some of our best equipped and most valuable teachers enter high school work in the state through the door of the State Board Credential; and it is not sound educational policy to place such restrictions and limitations on this credential as would practically debar from engagement in the state some very highly qualified and eminently desirable teachers, both from California and the East. The development of the junior college is attracting to that department of public school work some of the most successful faculty members of the smaller colleges of the state and even of the universities, and no unreasonable standards of certification should be set up to keep these men and women from

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entering public school work, for they are often the finest teachers procurable for the advanced work of the junior college.

It seems likely that within a few years it will be desirable to provide for a junior college credential which would be granted only to those having a master's degree or its equivalent, and which would enforce a higher standard of teaching experience than is now required for the high school credential.

The last session of the legislature placed upon the state board the responsibility of prescribing the regulations under which county boards of education shall issue certificates for the teaching of special subjects. This change was made at the earnest request of the educational leaders of the state, with a view of raising the standard for this class of credentials and providing for a uniform system of certification throughout the state.

The problem of rules and regulations for these credentials was studied with great thoroughness by the commissioners of education, and the plan was reviewed with careful deliberation by the members of the board. We were confident that we had established standards in general higher than had been in force in the various counties of the state under the old plan, and we hoped that one effect of state uniformity and strict requirements would be to restrict somewhat the number of credentials in special subjects.

We have, however, received a regular deluge of applications. During the year that the new law has been in effect, there have been filed with the commissioner of vocational schools practically 2,000 applications for credentials in special subjects, which include such a wide range of activities as boat making, flute playing, folk dancing, the making of hoop skirts, and the repair of automobiles. On advice of Commissioner Snyder, or members of the board, many of these applications have been withdrawn because the applicants were seeking certification in subjects not authorized to be taught in the schools of the state or because they were clearly not eligible to receive the credentials which they sought. Even then, after this sifting and the rejection of many of the cases considered, there were 851 special credentials granted during the year.

This does not mean that number of new teachers turned loose to compete for positions, for many of the applications granted have been to teachers already in service but whose special credentials were limited to some one county. If they had any assurance or even possibility of changing to some other county, they have taken the precaution to secure the state credential, which is good throughout the state.

Making all due allowance for this fact, and recognizing moreover that it is desirable that the schools have at all times the opportunity

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to choose from a number of well qualified teachers, we are convinced that it will be wise to raise still higher the standards for special credentials. The commissioners of education are now at work on a revision of the rules and regulations, with a view of stiffening the requirements; and it will certainly be the policy of the board for the coming year to adhere very rigidly to the standards which these new rules will impose.

During the past year, we have been granting credentials for the instruction of deaf children under a decidedly arbitrary interpretation of the law governing special certification. It seems desirable that the scope of the law be broadened so that the state board will clearly have authority to issue credentials to special teachers for defective or atypical children.

NORMAL SCHOOL REGULATIONS.

The last session of the state legislature imposed on the State Board of Education important responsibilities in the matter of standardizing the courses of study of the normal schools of the state and prescribing other regulations regarding their work. We did not seek this task, and have assumed it reluctantly. We are, however, seeking to meet the responsibilities with an earnest purpose both to promote the interests of the normal schools and also to encourage the general educational development of the state.

Through the commissioners of education, the state superintendent and the members of the normal school committee of this board, a careful preliminary study was made of the problem of standardization. The normal schools were visited and their methods studied; their courses of study were compared; and such information as was available was secured from other states.

The annual joint meeting of the state board and the normal school presidents, provided for by law, was held in Los Angeles last April, and the situation was thoroughly discussed in conference with Superintendent Hyatt and the three commissioners. The rules and regulations then agreed upon were carefully reviewed at the regular June meeting of the board and the final result will now be given the test of actual application to the organization and work of the schools. Some of the normal school presidents and other educational authorities in the state have said that the new plan is a great piece of constructive work. We sincerely trust the estimate is correct; we recognize, however, that the plan is in some degree an experiment and we shall watch its development with an open mind and a willingness to make adjustments in the future as conditions may demonstrate their necessity.

Heretofore the normal schools have been a law unto themselves; the old joint normal board never exercised any effective authority, and that was why it was discarded as a useless piece of educational machinery.

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It was expected that the change to a system of uniform regulations prescribed by a body entirely outside the normal school organizations might be attended with some friction; but, while differences did arise between the members of the board and the normal school authorities, they were less marked than those which developed among the normal school people themselves, and, in general, the best of feeling prevailed. On both sides there was certainly an earnest desire to improve the efficiency of the normal schools and make them a still greater power for usefulness in the state.

We feel hopeful that the new regulations will in general raise the standards of the normal schools and more effectively co-ordinate them with the public schools of the state. One effect will undoubtedly be to limit somewhat the output of the normals and compel some students who had hoped to graduate in two years to remain for three years. This result, however, we do not consider an objection. The normal schools now are graduating some 2,000 students every year, and that is several hundred more than can find positions. It therefore seems sound educational policy to require better preparation for entrance to the normals, high standards of training there, and strict requirements for graduation.

A copy of the normal school regulations is included in the report of the normal school committee, and any more detailed discussion of their character, therefore, seems unnecessary.

As a result of our study of the normal schools and our conference with the presidents and other representatives of these institutions, we desire to bear our testimony to the high educational ideals of their presidents and faculties and to the splendid service which the schools have rendered to the state. A larger percentage of the teachers of California than of any other state have had the advantage of normal training, and this fact is without doubt largely due to the efficiency of our normal schools and the superior advantages they offer. We most cordially commend the California normal schools to the confidence of the people of the state and to the favorable consideration of all who intend to enter upon the profession of teaching in the elementary schools.

BULLETINS ISSUED.

During the past two years the following bulletins have been issued by the commissioners of education, and their value as a means of disseminating educational information has been recognized and appreciated by the teachers and school people generally of the state:

High School Textbooks in California.
High School Athletics.
Official List of High School Textbooks.
Revised Rules governing High School Certification.

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Descriptive List of Text and Reference Books in Physics and Chemistry. (Now out of print.)
Cooperation in the Teaching of English.
Oral English in the High School.
New Laws relating to High and Intermediate Schools. (1915)
Regulations governing Educational Institutions Accredited to Recommend Individuals for Special Certificates.
Regulations governing Certification of Teachers of Special Subjects.
A Vocational Guidance Bibliography.
Union of School Districts.
Rules and Regulations for the Government of California State Normal Schools, etc.
Teaching of Music.
Permits to Teach in Intermediate Schools.
Disposal of Sewage in Rural School Districts.

The "Blue Bulletin," which is issued quarterly and edited in turn by the state superintendent and the three commissioners, has filled a unique place in supplying information regarding the activities of the department of education and giving publicity to helpful and timely suggestions. The "bulletin" was started as an experiment, but its value seems so well demonstrated that we shall certainly favor its continuance.

COOPERATION WITH OTHER BOARDS.

During the past biennial period the State Board of Education has cooperated with the Immigration and Housing Commission in the study of the problem of illiteracy, and with the State Board of Health in the preparation of a bulletin on school sanitation. There is now under consideration by a joint committee representing this board, the State Board of Health and the State Board of Charities and Corrections, the matter of legislation for the better care and instruction of defective children. Other instances of cooperation are discussed in the report of the Commissioner of Elementary Schools.

Whenever it is possible, it seems to us eminently desirable that there be consultation and cooperation among the various departments of the state government when their work touches on common problems.

LOS ANGELES OFFICE.

Within the past year, arrangements were made for the joint use of a room in the state headquarters in the Union League Building, Los Angeles, by the State Board of Education and the regents of the University of California. Mrs. Barnum has been spending certain hours on two days a week at these headquarters, and more recently a plan has been worked out whereby the commissioners of education, in turn, will spend a few days every month in the southern part of the state, making the board rooms headquarters. The president of the board has also arranged to spend one afternoon a month there in connection with the monthly visit of the commissioners.

It has been no uncommon thing for Mrs. Barnum to meet from 25 to 35 teachers or applicants for credentials in a single afternoon, and

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the new program is making possible group conferences on applications for credentials or retirement, or on other educational problems. The opportunity for consultation with the commissioners and members of the board, without the necessity of making a trip to Sacramento, is greatly appreciated by the people in the southern part of the state who are interested in educational matters.

It is quite possible that it may be found necessary to install a clerk in this office and keep it open every day. This step, however, will not be taken until the sufficiency of the present volunteer service, maintained practically without extra expense, has been fully tested.

LEGISLATION SUGGESTED.

Some important changes were made in the school laws at the last session of the legislature, and so far as the State Board of Education is concerned, the program of suggested legislation for the coming session will be a brief one.

The entire subject of legislation is discussed in detail in the report of the legislative committee, but some of the more important measures that we believe should receive the careful consideration of the legislature are the following:

Acting under the provisions of an act passed at the last session, the legislative reference bureau has prepared a codification of the school law. This work has been done with the advice and assistance of the legislative committee of this board and the commissioners of education. This codification will be submitted to the legislature for approval.

The Attorney General has recently ruled that under the provisions of section 1665 of the school law, the state board has no power to adopt any textbooks in elementary bookkeeping, humane education, elementary physiology and hygiene, music, drawing, and nature study, and that these subjects must be taught without textbooks. He has held, further, that while the textbook in physiology and hygiene now in use may be continued, no new text can be adopted. So far as that particular subject is concerned, the textbook has been in use for many years and it is logical to presume that sooner or later it will become out of date and it will be desirable to adopt a new text. There is no occasion at this time for entering upon a discussion of the question as to whether it is desirable, from the standpoint of educational efficiency, to provide textbooks in any other of the subjects mentioned. It had been generally understood, up to the time the Attorney General gave his opinion on the point, that the matter of providing textbooks in this entire list of subjects was optional with the state board; and it would seem desirable to amend the law so that this fact would be clearly stated. The absolute prohibition of textbooks in these subjects does not seem wise.

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The last legislature took steps to restore about 80 per cent of the loss suffered by the elementary schools by the abolition of the poll tax. This still leaves a considerable deficit in school revenues, as compared with conditions existing before the tax was abolished. At present the high schools are more adequately financed by state aid than the elementary schools, and we earnestly trust that some means will be found at least to increase the state aid for the elementary schools to such a point as will fully offset the loss from the poll tax.

Under a ruling from the Attorney General, the junior colleges have been deprived of the per capita of state aid extended to the high schools. The junior college is one of the most significant and important of all the recent developments in the educational work of the state; and it certainly seems fitting that any city which will take upon itself this important work of higher education, which is approved and encouraged by the State university and Stanford, should receive some state aid. If the law were amended so as to allow the same credit for attendance in the junior colleges as in the high schools, the amount of state aid called for under the present enrollment would be only about $15,000.00 a year, and the future increase would be slow, as the development of the junior college will, of necessity, be limited to a few centers of population rather remote from the great universities. We shall, therefore, urge an amendment to the law giving, at least, this recognition to the junior college.

Dr. Snyder, Commissioner of Vocational Education, in his biennial report calls attention to certain needed changes in the state law relating to evening schools. We are in hearty sympathy with the view that changes in the law are needed in order to make possible greater elasticity in the establishment and maintenance of this type of school. The law should certainly permit the organization and operation of such schools for such periods of time during the school year and for such hours during the week as the needs of the local communities may require; and that is not possible under the law as it stands. It moreover seems only just that communities which undertake this important form of extension education should be given some state aid.

RETIREMENT SALARY.

Our administration of the retirement salary law for the past three years has convinced us that it will be wise, at the coming session of the legislature, to revise this act. We recently requested the State Board of Control to have an expert accountant investigate the teachers' histories that are on file in the office of the board and make an estimate, based on life insurance methods, of the probable status of the fund for the next ten years. This work was done and the report is startling. The estimate is that by the end of ten years the fund

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will be facing a deficit that will require direct appropriations by the legislature. This situation has developed at a time when teachers and school trustees were carried away with the idea that the contributions of the teachers alone are sufficient to maintain the fund in a condition of great prosperity. Some of them have, therefore, been preparing to urge that the retirement salaries be increased and that all teachers be compelled to retire on completion of the 30 years term of service.

The following figures will indicate how rapidly the demands on the fund are increasing:

Sixty-sixth fiscal year--		
July 1 to September 30, 1914	$17,854 62	
October 1 to December 31, 1914	21,084 32	
January 1 to March 31, 1915	22,849 30	
April 1 to June 30, 1915	24,238 81	
		$86,027 05
Sixty-seventh fiscal year—		
July 1 to September 30, 1915	$27,114 05	
October 1 to December 31, 1915	32,621 80	
January 1 to March 31, 1916	38,923 16	
April 1 to June 30, 1916	41,987 66	
		140,646 67
Total		$226,673 72
Number of applications for the retirement salary considered by the retirement board during sixty-sixth and sixty-seventh fiscal years		349
Number of applications granted during sixty-sixth and sixty-seventh fiscal years		280
Retirement salaries granted on thirty years of service during sixty-sixty and sixty-seventh fiscal years		186
Retirement salaries granted on disability during the sixty-sixth and sixty-seventh fiscal years		94
		280
Number of annuitants on roll at end of sixty-seventh fiscal year		458

We have estimated that the disbursements for the present fiscal year will be a little over $200,000.00, and this amount will increase from year to year.

It is also quite certain that the federal inheritance tax will tend to reduce the state revenues from inheritances, and that reduction may seriously affect the retirement salary fund, which now receives 5 per cent of the collateral inheritance tax.

In order to safeguard the retirement salary fund, it may seem desirable that for the last 10 or 15 years before retirement the payment by the teachers be increased. It may also seem desirable to consider an age limit for full retirement, in view of the fact that many annuitants are now being retired at the age of 50. In the natural order of things, many of these will continue on the salary roll for 20 or 25 years. It may furthermore be wise to require a longer period of teaching before the applicant can be eligible to retirement for disability; and it seems to us no more than just to reduce the credit

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now allowed for eastern teaching. In conjunction with the Board of Control, we are studying the entire problem with great care, and may suggest some amendments to the law.

We regard the law as a great piece of constructive legislation, and its benefits to veteran teachers has been so obvious as strongly to commend the system to public favor. We believe, moreover, that the good faith of the state is pledged to a continuation of the plan. All that we desire is to see the system placed on a sound and stable basis that will prevent such a deficit as might imperil the existence of the law.

SUPPORT OF TEACHING PROFESSION.

In all its work and in the activities of its commissioners, the State Board of Education has had the cordial support of the superintendents and the teachers of the state, of various educational organizations and of the faculties of the University of California, Stanford University and the University of Southern California. We desire to express our appreciation of the spirit of cooperation shown by these various educational interests of the state.

HARMONY OF DEPARTMENT.

In closing, we desire to express our sincere appreciation of the efficient services rendered the state by the three commissioners of education, and for the loyalty and faithfulness with which they have cooperated with the members of the board. We desire further to give recognition to the cordial manner in which State Superintendent Hyatt and the employees of his office have cooperated with the state board and its commissioners. The entire department of education has worked as a unit for the promotion of the interests of the schools of the state, and we trust the results have been in some degree commensurate with the sincerity of purpose with which the services have been rendered.

STATE BOARD OF EDUCATION,
By E. P. CLARKE, President.

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PART II.

REPORTS OF THE COMMITTEES.

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REPORT OF TEXTBOOK COMMITTEE.

In the report of the Textbook Committee contained in the biennial report of the State Board of Education for the fiscal year 1913 and 1914, it was noted that the books then in use in the elementary schools of the state had all been selected and contracted for by the former State Board of Education. At the time of the above-referred to report, only three textbook contracts had expired; for the introductory history, for the spellers and for the writing books. The board was then engaged in an experiment in the preparation of a speller, and a Speller Bulletin for teachers' use was printed and has been in the hands of the teachers of the state long enough to give some very desirable data on the real speller needs of our schools. A new speller will doubtless be secured during the current school year.

The board deliberately delayed seeking new introductory history and writing books while plans for procedure in such matters were being formulated. One thought has been kept constantly in mind, namely, that this is a lay board and must depend for its technical decisions upon the judgment of experts. Such experts must be loyal to the schools of the state, and textbook experts must remain uncontaminated by any selfish interest while considering the merits of texts submitted to them for their review. To make its requirements distinctly known, a resolution was passed at the meeting of the board in September, 1914, which set forth the following rule as the principle upon which it proposed conducting all textbook submissions:

> It shall be inadmissible for any author, publisher, or representative of author or publisher to discuss the merits of any textbook with any member of the State Board of Education, or with any commissioner, textbook assistant, or other official of said State Board of Education, during such time as the textbook, series, or system is under consideration. No oral presentation shall ever be made except on request, and under rules prescribed by the State Board of Education; and any written presentation or communication relating to the textbook, series, or system in question, whether intended for members of the State Board of Education, or for commissioners, textbook assistants, or other officials of said board, must be addressed to the State Board of Education.

This statement forms a part of every advertisement for textbooks and is lived up to by the members of the board, the commissioners, critic readers, employees and textbook experts. Drastic as it seems at first glance, no author or publisher's representative has taken exception to it or tried to defeat the purpose therein manifested. The harmony that has characterized these contests has enabled the board

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to act in perfect fairness and has silenced the old time criticism on textbook contracting.

At various times during the last two years, the secretary of the board has been instructed to insert in certain advertising mediums advertisements calling for the tender of manuscripts or texts for writing books, primer and eight readers, introductory history and history of California, all of these to come under the rule as given in the above resolution. A special appeal has been made for a manuscript on citizenship for use in the elementary schools to take the place of the present Civics. The resolution calling for the new Civics expressed the wish of the board as follows:

> "We desire that this book shall be so written as to depict in a graphic manner and in simple language the individual's relation, from the time of childhood to the age of citizenship, to the community, the state and the nation, and conversely, the duty of the nation, state and community to the citizen and child. With equal care it should show the responsibility of employee to employer, and of employer to employee.
>
> "It should illustrate the application of these relationships particularly through their working in the laws and institutions of the state of California, as largely as possible, and should describe briefly the workings of the various commissions and departments of our state government. When methods or conditions in California contrast markedly with those prevailing elsewhere, particularly in such matters as the ballot, suffrage, etc., the comparison should be fairly made."

The contest for a textbook on citizenship has not yet been closed, and it is trusted that a book may be secured which will teach the children of California the glories of their state, the strength and virility of its government and the beneficence of its institutions, thus laying in them the foundation for a surer and more stable patriotism.

Texts or manuscripts for English have been called for, which will be considered during 1916–1917.

California schools share with the schools of the world in studying a geography at present shockingly behind a time that is changing its maps too fast for even the printing press. Last year a brief supplement was added to geographies in use to cover such changes as could be safely relied upon for the moment.

METHOD IN SELECTING TEXTBOOKS.

As has been noted before in this report, the present State Board of Education proceeded deliberately in formulating rules to govern its textbook submissions. The fundamental rule applying to all submitting texts has been given. Each book or manuscript submitted came immediately under the following rules for critical examination. Each subject was assigned to the special care of one of the commissioners

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of the board; then, each text and the publisher's brief of the same was submitted to expert readers, selected for acknowledged skill in the particular branch being studied; second, each text was considered by the board and commissioners, while the author or the representative of the publisher presented arguments, and finally the textbook readers' criticism and author's and publisher's arguments were reviewed by a committee composed of the Superintendent of Public Instruction and the three commissioners, whose unanimous report was given to the Textbook Committee, and by them presented to the board. At no stage of the consideration so far outlined was the price known to any of the critics. After the above expert study and report, which simply tabulated the critical standing of the books submitted, the board opened, in public meeting, all the bids. This presented a new viewpoint. The determination of this board has been to give to the children of California the best to be had, and, to this end, price has been kept in the background until quality was fully established. So far in every instance the adoption has been in accordance with our educational expert's recommendation. Fortunately, highest quality has come with fair prices, and it is gratifying to know that the best has been secured without any possible criticism of extravagance.

The results of the submissions already held are to be seen in the following adoptions, which are here tabulated with the royalty to be paid during the first four years, second four years and third four years, should the text continue in use. Or, as in the instance of the sixth, seventh and eighth grade readers and the History of California, the price paid outright for the manuscript.

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Table of New Textbooks Selected by this Board.

Name of book	Publisher	Author	Royalty by 4-year periods 1	2	3	Publishers' retail price	Our cost price
Primer	Row, Peterson & Co.	Free & Treadwell	$.048	$.04	$.0352	$.32	$.15
First Reader	Row, Peterson & Co.	Free & Treadwell	.054	.045	.0396	.36	.16
Second Reader	Row, Peterson & Co.	Free & Treadwell	.06	.05	.044	.40	.18
*Third Reader	Rand, McNally & Co.	Holton Curry	.0575	.0525	.0475	.40	----------
*Fourth Reader	Silver, Burdette & Co.	Burchill, Ettinger & Shimer	.085	.08	.08	.50	----------
*Fifth Reader	Silver, Burdette & Co.	Burchill, Ettinger & Shimer	.095	.09	.09	.55	----------
Sixth Reader	State of California	L. E. Armstrong	1,000.00	333.33	333.33	†	.20
Seventh Reader	State of California	L. E. Armstrong	1,000.00	333.33	333.33	†	.20
Eighth Reader	State of California	L. E. Armstrong	1,000.00	333.33	333.33	†	----------
Mace's History	Rand, McNally & Co.	Wm. H. Mace	.08	.074	.071	.65	.30
With California sup.	State of California	Percy F. Valentine					
History of California	State of California	Percy F. Valentine	500.00	----------	----------	‡	‡
Writing Books—1 to 8	Zaner & Bloser Co.	Zaner	.01	.00875	.0075	.05	.03

*Not to be distributed till 1917.
†Owned by state of California. Not published elsewhere.
‡Not sold except as part of Introductory History.

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The following is a list of the authorized textbooks in use in the elementary schools of the state during the school year of 1916–1917, grouped by publishers and showing date of the expiration of contracts. For details of the cost and distribution of textbooks please refer to the tables appended.

Present Contracts with Publishers.

	Royalty (per copy)	Date of expiration of contract
American Book Company—		
McMaster's Brief History of the United States	$.15	Jan. 1, 1918
McClymonds & Jones Essentials in Arithmetic	.09	July 1, 1918
McClymonds & Jones Elementary Arithmetic	.0525	July 1, 1918
D. C. Heath & Company—		
Dunn's Community and the Citizen (Civics)	.125	Jan. 1, 1918
The Macmillan Company—		
Chancellor's Speller (two books)	.025	July 1, 1911
Tarr & McMurry Introductory Geography	.09	July 1, 1916
Tarr & McMurry Advanced Geography	.15	July 1, 1916
Rand, McNally & Company—		
Holton Curry Third Reader	.0575	July 1, 1921
Mace's Beginners' History	.08	July 1, 1920
Row, Peterson & Company—		
Primer (Reading-Literature Series)	.048	July 1, 1920
First Reader (Reading-Literature Series)	.054	July 1, 1920
Second Reader (Reading-Literature Series)	.06	July 1, 1920
Silver, Burdette & Company—		
Fourth Reader (Progressive Series)	.085	*
Fifth Reader (Progressive Series)	.095	*
Guide Books to English (Book 1)	.0675	July 1, 1916
Guide Books to English (Book 2)	.09	July 1, 1916
State of California—		
Sixth Reader (Literature Readers)		†
Seventh Reader (Literature Readers)		†
Eighth Reader (Literature Readers)		†
World Book Company—		
Primer of Hygiene	.06	July 1, 1916
Zaner & Bloser Company—		
Zaner Method Writing (eight books)	.01	July 1, 1920

*Adoptions made; contract not drawn.

†Publishers' rights for California purchased outright.

CHARACTER OF NEW TEXTBOOKS.

Great strides in textbook making have been taken since the readers just discarded were adopted by the former board, and it has been found necessary to step well to the front in selecting new books that will stand in the lead for a period of years. In the Primer, first and second readers, this board has taken the pace of the most advanced and has offered our children for the first time, beginning with this school year, texts printed in two or three colors, with subject matter deemed by educational experts best adapted to hold the interest of the little child's mind. The Third Reader begins to take into consideration the growing mind and caters to an advance in learning, which it feeds on greater variety. Thus the whole system is built up through the fourth and fifth readers until we reach the sixth, seventh and

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eighth readers, for use in corresponding grades, which try to establish literary tastes in the child with prose and poetical masterpieces. The new sixth, seventh and eighth grade readers are the work of a former California teacher, Mr. Leroy E. Armstrong of Los Angeles, who worked out the plan and subject matter while teaching in our schools.

The old readers, which have been displaced, have not been wholly discarded, for instructions have gone out from the Superintendent of Public Instruction's office that those fit for use shall be placed in the school libraries for supplementary reading matter.

The new history known as Mace's Beginners' History of the United States takes the place of a book secured in 1904. For the old book a royalty of 15 cents was paid; for the new book only 8 cents is to be paid during the first four years. The new book is about 30 pages larger. After selecting the Mace text, which received the unanimous recommendation of the history experts, it was found necessary to have a part of the original text rewritten to bring the West and Western development, in which we and our children are vitally interested, up to their proper place in the history of our country. Occasion was also taken to shift the accent from war heroes to peace heroes and peace developments. Some matter was stricken out and whole chapters of new matter on The Beginning of Expansion Abroad, Westward Expansion and Development, Heroines of National Progress and Resources and Industries of our Country, were written by Dr. Mace at special request. It is interesting to learn that the publishers have substituted the text as revised for the schools of California for their former book, and are now offering it to the schools of other states. It is believed that this is the first school history to give proper place to Western development, and the first to accord to woman her historic place.

At the time the call was made for tenders of texts for the introductory history, a call was also made for manuscripts of a brief history of California for the same grades. This call brought a number of manuscripts written by California authors and from among them was selected one written by Mr. Percy F. Valentine, teacher of history and civics in the San Francisco State Normal School, which the history experts advised as best suited to the needs of the children of the state, and this, as finally arranged, has been printed and bound as a supplement to the Mace's History. It is also bound separately in pamphlet form. For the first time, the children of our state have a history of its romantic origin and phenomenal growth written in language suited to their minds, and it is to be hoped that this little History of California will find its way into every private school in the state also.

An interesting study is under way in the preparation of a text to be

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used in teaching citizenship to adult aliens. There are classes for these in most of the large centers of the state where aliens congregate, and it is expected that, through cooperation with the Immigration and Housing Commission, such a text will soon be provided for uniform use in the schools of the state engaged in this work. This will supply a means of enabling such aliens to pass the examination required before final citizenship papers can be secured and giving them, at the same time, a little grounding in and knowledge of the institutions and civic advantages of their adopted state.

BOOKS IN USE IN THE SCHOOLS.

During the school year from July 1, 1914, to June 30, 1915, there were distributed, as shown in the tables appended, 493,159 school books. During the school year of 1915–1916, there were distributed 491,670. This is a contrast to 1,379,154 for 1913–1914 and 477,933 for the half year beginning January, 1913, when the free distribution commenced. In other words, with 6 per cent average annual increase in school attendance the actual number of books issued has fallen off. The system of free textbooks has not been established long enough to supply a reasonably accurate cycle of their life time, but it may be safely assumed that a large part of the million and three-quarters books issued in the first year and a half of free distribution will soon have to be replaced.

It has been found to be impracticable to issue any instructions regarding the disposition of old or used textbooks. It is impossible to say when a book is too old or worn for use. There is some complaint because of the condition of some of the books in use, but the problem can not be met by any general, or long range rule. There has been no inclination on the part of the schools to be wasteful of books, rather otherwise. A questionnaire sent to the county and city superintendents has revealed the fact that the Primer and First Reader wear out soonest and the books for advanced grades will some of them last five or six years, while three years is a low average for all books in all grades. There is a growing demand among parents and teachers that each child be given his books outright and required to pay for any replacement if lost or damaged. Another call is the old one for publication of texts in pamphlet form, to be given outright to the child. The first plan presents the better method, if it were feasible, as a child would soon lose all respect for a paper covered booklet and thus miss the instruction in the care of and respect for books which should be a part of his education.

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GIFT OF TEXTBOOKS TO PUPILS

To see how remote the gift of books to pupils is, please note these figures: On the basis of present attendance, considering the increase per year for the next four years at present rate of increase in school attendance, it can be fairly estimated at actual cost of books to the state that to give the children outright such books as are now published, though at a new cost which must be based on increased cost of of all printing material, would require for the school year 1917–1918 about $389,500, 1918–1919 $413,000, 1919–1920 $437,500, 1920–1921 $464,900. These figures represent an expenditure probably three times the cost of free textbooks by our present method. All the textbooks published by the state in the school year of 1914–1915 cost but $113,558.79. For the year 1915–1916, $115,442.85. Now deduct about 10 per cent for books sold to private schools and parents and then add 50 per cent for the increase cost which will be felt next year, 6 per cent for increase in attendance for each of two years, and it will be seen that an estimate of cost for the year 1917–1918 figured thus would be about $118,000, instead of the estimated cost to give each child his books outright, as shown above, of $389,500.

One way of avoiding the objectionable use of old books in individual cases remains. The parents who object may buy state texts for their children. Reference to statements of expenditures and textbook costs up to this time contained in the appendix of this report can not be used to compare with these figures for the cost of books in future years, because all printing materials have greatly advanced in price. Textbooks printed this year do not show this advance, for the reason that paper and ink stock sufficient for the year was purchased before the rise, which is now more than 50 per cent above last year's costs.

THE BIENNIAL QUESTION, STATE PUBLICATION?

The customary, trivial, interested or selfish criticism of the expense of state publication has gone on, though haltingly. Truth, when given, holds California up to the commendation of the country, but some of her citizens seem to prefer subjecting their state and its institutions to ridicule rather than taking advantage of every advanced idea to show its progress. The State Board of Education was notified some time ago that its books and the cost finding and accounting systems in the state printing office would be thoroughly examined by expert accountants employed by interests antagonistic to the plan of state publication, in an effort to prove the statements regarding California textbook costs to be false. That was a year ago. They were given every assistance in their efforts to obtain the information they sought, but no report of this investigation has ever reached the board nor has

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it appeared in the press, a sufficiently sure sign that the statements made in the past showing the economy and efficiency of California's state publications to have been true.

HIGH SCHOOL TEXTBOOKS.

The official list of high school textbooks in use when this board was created contained over 1,150 titles. Two years ago this board cut down the number of books on the list and during the past year a very careful study was made to ascertain what texts were in actual use. It was agreed that for 1916–1917 no textbook should be listed as an authorized high school text that had not been in use in five high schools during last year. This action cut the list of texts down again and it now contains only 369 titles, removing the unsightly deadwood which impressed one with the idea that the high schools of California had very lax standards of textbook requirements. Exceptions to this rule as to textbooks listed for the high schools have been made in favor of texts for new subjects or to meet peculiar conditions.

The old large list of textbooks, coupled with a lack of standardization of courses of study among the high schools and a feeling that courses were often changed unnecessarily, causing expense to students and parents, has excited some demand for free textbooks and state publication for high schools. The magnificent success of the free textbooks for elementary schools and the resulting benefit to parents and the printing trade has further excited interest in this movement. The last legislature appointed a joint committee which is at work upon the question and will fully cover the field in its report. But, from our practical experience in textbook publication, we believe it unwise and inexpedient as well as unprofitable for the state to undertake the publication of high school texts.

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STATEMENT OF EXPENSE FREE TEXTBOOKS.

There is presented herewith the financial statements of the free textbook accounts as they appear on the books in the office of the State Board of Education, which are in agreement with the accounts in the office of the State Controller. These are dated June 30, 1915, and June 30, 1916, respectively, the close of the last two fiscal years.

Receipts Year 1914–1915.

Balance in schoolbook fund July 1, 1914	$129,906 56
Remainder of original appropriation	200,000 00
Sales during year	6,884 90
	$336,791 46

Disbursements.

State Printer, cost of printing	$69,414 17
Royalties	40,543 58
Freight and postage	3,155 81
Salaries	350 00
Miscellaneous	95 23
Balance	223,232 67
	$336,791 46

Receipts Year 1915–1916.

Balance in schoolbook fund July 1, 1915	$223,232 67
Schoolbook appropriation	250,000 00
Sales during year	6,837 09
	$480,067 76

Disbursements.

State Printer, cost of printing	$74,710 65
Royalties	27,235 08
Freight and postage	2,833 12
Salaries	600 00
Miscellaneous	66 00
Balance	374,624 91
	$480,067 76

MARSHALL DEMOTTE,
MARY G. BARNUM,
AGNES RAY,
GEORGE W. STONE.

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REPORT OF THE COMMITTEE ON NORMAL SCHOOL

SACRAMENTO, CALIFORNIA, September 27, 1916.

To the Honorable State Board of Education.

The Committee on Normal Schools was organized in September, 1913, with President William H. Langdon as chairman, and Lawrence E. Chenoweth and Mary G. Barnum as members. No report was submitted in 1915 because legal complications left the jurisdiction of the State Board of Education somewhat in doubt regarding normal schools. It was the wish of the committee not to assume any responsibility that the law did not distinctly impose.

In 1915 the presidents of the California state normal schools presented to the State Board of Education for its approval a proposed bill, which with some minor changes was passed by the legislature and went into effect August 8, 1915. The principal provisions are as follows:

"(Section 1519). At the joint meeting of this board and the representatives of the normal schools of the state provided for in section 1518*a* of the Political Code, matters affecting the normal schools may be presented by members of the board, by the Superintendent of Public Instruction and the commissioners of education, and by the representatives of the normal schools, and, after due presentation and consideration, the board may adopt rules and regulations for the government of the normal schools in the following matters:

"(*a*) The standardizing, as far as the board shall deem it wise and necessary, of the courses of instruction offered in the several normal schools for the preparation of teachers for the public schools of the state.

"(*b*) The establishing and conducting in any or all of the normal schools of the state of such courses of instruction as shall prepare for the public schools of the state special teachers in any or all of the subjects of drawing, music, physical culture, and commercial, technical or industrial branches.

"(*c*) The compiling and publishing of a list of textbooks for use by the students of the several normal schools of the state; provided, that the state series of textbooks shall be used in the grades and classes for which they are adapted, and that all other regular textbooks shall be selected by the various normal school authorities from said list.

"(*d*) The prescribing of the standards of admission for students entering the normal schools, and the rules for transfer of pupils from one normal school to another; provided, that a student for good cause, may, upon recommendation of the president of the school from which he seeks to be transferred, enter any other

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normal school and without examinations be admitted to classes corresponding to those in the school which he has left.

"(*e*) The determination of the time and standards for graduation from the state normal schools."

In view of the heavy responsibilities imposed by this new law, the Committee on Normal Schools began active work with anxiety and reluctance, and a sense of keen regret in the resignation of its chairman, Hon. Wm. H. Langdon. Since September, 1915, it has been reorganized, the sole survivor of the original committee appointed chairman, and Mr. George W. Stone and Mr. M. B. Harris members. A grateful sense of confidence comes from the fortunate fact that Mr. Harris is an active trustee of one of the state normal schools and has had illuminating experience as a member of the former Joint Board of Normal School Trustees.

For convenience, this report includes a brief account of normal school matters, but it should be understood that conference and action regarding most of them represent the work of the entire board and its commissioners.

As soon as the law went into effect, an informal conference was held with the presidents of the normal schools (at Oakland, August, 1914). Each was requested to give in general terms—and later to file in detail—information regarding standards of admission, courses of instruction, general and special, lists of textbooks used, and times and standards of graduation. Although there seemed to be wide divergence in some respects, this cordial and helpful conference showed an ardent desire on the part of all concerned to give California's prospective teachers the best possible preparation for their life work. The board was interested to find that the normal school presidents generally expressed the opinion that a three-year period of training might be desirable in the future and might tend to limit the number of graduates.

During the fall and winter a number of urgent problems were brought to the board by the officers of normal schools and of the Board of Control. These were met, so far as immediate action was required. It was felt, however, that arrangements already made by the several normal schools should continue during the school year 1915–1916, and these were formally authorized as follows:

"Whereas the new law, effective August 8, 1915 (section 1519), provides that the State Board of Education shall adopt 'rules and regulations' for 'the government of the several normal schools of the state' only after an annual meeting with the presidents of the several normal schools (section 1518*a*) 'held to consider and act upon matters pertaining to the several normal schools of the state.'

"Whereas the normal schools of the state are now in session, with their courses of study and textbooks fixed for this year, under

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regulations adopted at the regular meeting of the Joint Board of Normal School Trustees held in April, 1915; therefore,

"It is the opinion of the State Board of Education that the first annual meeting under the new law be held in April, 1916, to adopt 'rules and regulations' for 'the government of the several normal schools of the state,' beginning with the school year of 1916, and that in the interim the *statu quo* be maintained in order not to disturb the conduct of the normal schools of the state in the middle of a regular school year."

"*Resolved, further,* that the provisions of this resolution be interpreted to extend to the courses of study of the several model and training schools, including ninth grade courses of study, where such courses have been established, and that such courses of study be, and the same are, hereby approved for the year ending June 30, 1916."

In preparation for the joint meeting of the State Board of Education and the normal school presidents a number of steps were taken, to insure harmonious and intelligent action concerning admission requirements, courses of study, requirements for graduation and other matters in which standardization was contemplated by the law.

Plans for the meeting were made by the Superintendent of Public Instruction for April 11, 1916, at Los Angeles, at the office of the State Board of Education. A tentative program was prepared in cooperation with the chairman of the normal school presidents—Dr. M. E. Dailey. This program included, under the general subjects stipulated in the law, the topics on which the normal school presidents had requested discussion.

The Commissioner of Elementary Schools was requested to complete her file of catalogues and lists of textbooks; also to secure any additional information desired. All commissioners were requested to visit the normal schools of the state as much as their schedules and itineraries would permit; all the commissioners were requested to give careful study to the matters in which the law contemplated that the state board should adopt rules and regulations after presentation and consideration at the joint meeting.

The board requested the chairman and members of the committee to visit as many of the normal schools as possible, and the chairman found much pleasure and profit in becoming better acquainted with the state normal schools at Chico, San Francisco, San Jose, Fresno, Los Angeles, and—on previous occasion—Santa Barbara and San Diego.

Local school boards employing normal school graduates were consulted where possible, as well as university authorities where such graduates have pursued advance work. University registrars kindly furnished on request valuable statistical tables.

A questionnaire was sent by the Commissioner of Elementary Schools to all county and city superintendents. The prompt and general

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response afforded much useful information and suggestion. Space forbids including a copy of the questions and complete tabulation of the returns.

The proceedings of the joint meeting, April 11–15, at Los Angeles, will be found in the minutes of the State Board of Education. The Rules and Regulations adopted are as follows:

REGULAR TEACHERS' COURSE.

MINIMUM REQUIREMENTS FOR ADMISSION TO REGULAR TEACHERS' NORMAL COURSE.

I. General qualifications.

Every person admitted as a student to the normal schools of the state must be of good moral character, of good health, without physical or other defect which would impair his fitness for the teaching service, of at least sixteen years of age, and of that class of persons, who, if of proper age, would be admitted to the public schools of the state without restriction.

II. Units.

A unit is hereby defined to be a course of study of five full periods per week, taken for one year of not less than thirty-six weeks. Fractions of units may be accepted and counted.

III. Requirements for provisional undergraduate standing.

(*a*) Graduates of public high schools of California approved by the State Board of Education, graduates of other schools of California recognized by the University of California as qualified to recommend students for entrance to said university, and graduates of schools of secondary grade of other states recognized by the president of the normal school concerned as equal in rank to an accredited public high school of California, who have completed a regular four-year course of study, amounting to not less than fifteen entrance units, and who are recommended in eleven units by the principal of the school in which such course of study was completed, may be admitted to provisional undergraduate standing.

(*b*) Teachers holding valid primary, elementary, kindergarten-primary or special certificates to teach in any county of the state may be admitted and given such provisional undergraduate standing as may be determined by the faculty of the school.

(*c*) Holders of normal school diplomas or certificates granted in other states, who present satisfactory evidence that they have had training equivalent to that required for admission to the normal schools of this state, may be admitted and given such provisional undergraduate standing as may be determined by the faculty of the school, provided that at least four units shall be required for graduation.

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(*d*) Applicants for admission who present more than sixteen units of credit, or who have had advanced work in a postgraduate course in a high school, or in any institution of collegiate grade, may be admitted and given such provisional undergraduate standing as may be determined by the faculty of the school, provided that at least four units shall be required for graduation.

(*e*) Holders of bachelors' degrees issued by institutions authorized by the State Board of Education to recommend applicants for the high school teacher's certificate and holders of bachelors' degrees issued by American colleges and universities which are on the latest accredited list of the Carnegie Foundation, may be admitted and given such provisional undergraduate standing as may be determined by the faculty of the school; provided, that such persons may be graduated only after completing a minimum of two and one-half units of professional work in the normal school.

(*f*) Persons over twenty-four years of age, not possessing the credentials prescribed above, may be admitted to provisional undergraduate standing on such special qualifications of character, education and general intelligence as may, in the judgment of the faculty of the normal school concerned, be equivalent to any of the above requirements; provided, that such persons may be graduated only after completing a minimum of two and one-half units of professional work in the normal school.

(*g*) A student received by transfer from another California state normal school shall not be graduated until he has completed at least two full units of work in the period immediately preceding graduation.

(*h*) Persons who have satisfied the president of the normal school concerned that they have completed a high school course or the equivalent, and who have passed acceptable examinations in eleven units of high school work, may be admitted to provisional undergraduate standing. Only the examinations given for admission to the University of California or any other institution in California authorized by the State Board of Education to recommend applicants for the high school teachers' certificate and the examination given by the college Entrance Examination Board, shall be accepted as meeting this requirement.

IV. Requirements for full undergraduate standing.

Students who have fulfilled the requirements for provisional undergraduate standing, and who have passed a satisfactory examination in reading, writing, spelling, English grammar, composition, arithmetic, and geography, or who have completed the course or courses provided in these subjects in the normal school, may be admitted to full undergraduate standing. Such examination shall be given not later than the

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end of the first half-year after entrance into the normal school. Should the student fail to pass a satisfactory examination in any of these subjects, such student shall be remanded to a regular high school or normal school class offering work in the subject or subjects in which he has failed. In order that the standards of proficiency maintained in these subjects shall be uniform throughout the state, the State Board of Education shall from time to time adopt regulations governing such examinations. A graduate of a normal school or the holder of a bachelor's degree, or a teacher holding a certificate of elementary grade may be excused from any or all of the above examinations by the faculty of the normal school concerned.

MINIMUM REQUIREMENTS FOR GRADUATION FROM THE REGULAR TEACHERS' COURSE.

No student shall be admitted to candidacy for graduation who has not been admitted to full undergraduate standing.

Before graduation, each candidate must complete credit courses beyond a complete elementary school course as follows:

General requirements.

Normal School Equivalents		Units
36	*English Literature and Language, including grammar, composition and oral expression	2
18	*Physical Science—One year of general science, including the applied elements of physics, chemistry and physical geography, or one year of physics or chemistry or physical geography, provided that for students entering after June 30, 1918, the general science shall be prescribed	1
18	Biological Science, including physiology, hygiene and sanitation	1
18	*History of the United States and Civics, including local and state government	1
36	*World History	2
18	Drawing and Painting, including applied design	1
18	Music, including sight reading, two-part singing, and elementary harmony	1
18	Manual Training or Household Arts or Elements of Agriculture, including practical work in gardening, floriculture and plant propagation, one unit, provided that for students entering after June 30, 1919, one unit shall be required in Manual Training or Household Arts, or both, and one unit in Elements of Agriculture, including practical work in gardening, floriculture and plant propagation	1
18	*Mathematics, including general mathematics or the applied elements of algebra or plane geometry, or commercial arithmetic	1

Professional requirements.

9	**Elements of Applied Sociology, including the study of institutions and social organizations, rural life and rural school problems	½
18	**Education, including a study of the school as an institution and the curriculum, general psychology applied to education and general method	1

*Must be taken in a high school.
**Must be taken in a normal school.

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49½	**Practice Teaching and Special Methods which shall familiarize the student with and give him a mastery of the state series of textbooks, and which shall in addition thereto include special methods in all of the required statutory subjects; provided, that at least one (1) unit shall be given to practice teaching and at least one-third of the total time given to practice teaching shall be in a classroom, by the classroom method and under direct supervision	2½
4½	**The California School System, School Law, and their development	½
9	**Physical Education, Athletics, Play, School Playground Equipment, and Indoor and Outdoor Recreation	½
144	Possible Electives	8
126	Possible Electives for those entering after June 30, 1918	7
432	Minimum units required for graduation	24

Students entering under the provisions of III (*a*), Part II above, must complete at least three of the possible elective units in the normal school.

Elective units secured in normal schools may include any of the unstarred subjects listed under "Requirements for Graduation."

Commercial, industrial and economic history, or commercial and industrial geography, or any combination thereof amounting to one unit, may be offered in lieu of one unit of world history.

A student of a normal school serving as a student teacher shall receive credit only for teaching done in a normal training school, or as an assistant to a regularly certified teacher who shall supervise the work.

All normal schools of this state, other than the Santa Barbara State Normal School of Manual Arts and Home Economics, must maintain class instruction in all of the courses listed under the subheading "Professional Requirements."

These regulations shall become effective for students entering normal schools after January 1, 1917.

SPECIAL TEACHERS' COURSES.

MINIMUM REQUIREMENTS FOR ADMISSION TO SPECIAL TEACHERS' NORMAL COURSES.

Any person having the qualifications prescribed for provisional undergraduate standing in the "Regular Teachers' Normal School Course" may be admitted to the special teachers' courses maintained by any of the state normal schools other than the Santa Barbara State Normal School of Manual Arts and Home Economics.

Any person who submits evidence of having completed in a satisfactory manner a minimum of two full years of academic or professional training beyond a high school course may be admitted to any of the special teachers' courses maintained in the Santa Barbara State Normal School of Manual Arts and Home Economics.

**Must be taken in a normal school.

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Persons who satisfy the faculty of the normal school concerned that they have qualifications equivalent to any of the above requirements, may be admitted into special courses in such normal schools as are authorized to train teachers in special subjects, provided that they pass an examination in oral and written expression. These students may be given such standing as may be determined by the faculty of the school involved.

MINIMUM REQUIREMENTS FOR GRADUATION FROM SPECIAL TEACHERS' COURSES.

The minimum requirement for graduation in any special subject or in any group of special subjects shall be the minimum requirement specified in the regulations established by the State Board of Education August 21, 1915, for the government of educational institutions accredited to recommend individuals for special certification, as set forth in Bulletin 10.

KINDERGARTEN TEACHERS' COURSE.

MINIMUM REQUIREMENTS FOR ADMISSION TO AND GRADUATION FROM KINDERGARTEN-PRIMARY COURSE.

The regulations and requirements for admission to and graduation from Kindergarten-Primary Course shall be the same as those established for entrance to and graduation from the Regular Teachers' Normal Course, with the following modifications and additions:

Modifications.

The one required unit of education shall include at least one-half unit of professional work which shall deal with the principles and theory of kindergarten and child life.

The two and three-fourths units of practice teaching and special methods need not include methods and practice teaching in subjects not taught in the first two grades of the elementary school, but shall include principles and theory of kindergarten and child life.

One-half of the minimum requirement in practice teaching shall be in a kindergarten, the other half in a first grade.

Additions.

At least one-half unit in physical education in addition to that specified for elementary teachers shall be required. This additional work shall be given with special reference to kindergarten plays and games.

One-fourth of a unit in primary and kindergarten literature and story-telling shall be required.

One-half unit in primary and kindergarten handwork shall be required.

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One-half unit of special kindergarten music, including piano playing, shall be required, and no student may be admitted to the Kindergarten-Primary Course who can not play simple melodies, songs and marches upon the piano.

STATE BOARD NORMAL SCHOOL REGULATIONS.

Many inquiries have been received regarding the interpretation and application of these, and conferences held with officers and members of the faculty and boards of trustees of normal schools. The questions have been carefully considered by the committee, the commissioners and the board, and copies of responses sent to normal schools and kept on file.

Hearty expressions of approval have come from high educational authorities, who very kindly say that the provisions are "admirable," "constructive," will "without doubt improve elementary teaching in the state" and that they set advance "pioneer" standards for many of the normal schools of the East.

It is impossible to discuss here many of the excellent features of the plan. Probably the most important single feature is its requirement throughout a six-year period of work that has distinctly professional value. Concerning this requirement two things should be noted.

First, it can be met readily by students in our California high schools. The Commissioner of Secondary Schools reports that "All the high schools are offering courses that satisfy the minimum requirements fixed by the state board for admission to the normal schools."

Second, the high school preparation indicated is highly desirable, not only for improved elementary teaching, but also for genuine educational preparation for life. Shortly after the "Requirements" were adopted, Bulletin No. 10, 1916, was received from the United States Bureau of Education, including "Needed Changes in Secondary Education," by Charles W. Eliot, President-Emeritus of Harvard College.

Dr. Eliot says in part:

> "The best of all human knowledge has come by exact and studied observation made through the senses of sight, hearing, taste, smell, touch. The most important part of education has always been the training of the senses through which that best part of knowledge comes.
>
> "The programs of secondary schools in the United States allotted only an insignificant portion of school time to the cultivation of the senses through music and drawing. As a rule the young men admitted to American colleges can neither draw nor sing; and they possess no other skill of eye, ear, or hand.
>
> "Many highly educated American ministers, lawyers, and teachers have never received any scientific training, have never used any instrument of precision, possess no manual skill whatever, and can not draw, sing, or play on a musical instrument. Their entire

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education has dwelt in the region of language, literature, philosophy, and history, with a brief excursion into the field of mathematics. Many an elderly professional man, looking back on his education and examining his own habits of thought and of expression, perceives that his senses were never trained to act with precision; that his habits of thought permit vagueness, obscurity, and inaccuracy, and that his spoken or written statement lacks that measured, cautious, candid, simple quality which the scientific spirit fosters and inculcates.

"It is high time that the American school—urban or rural; mechanical, commercial, or classical; public, private, or endowed —set earnestly to work to repair this great loss and damage.

"If the elementary and secondary schools served well boys and girls from 6 to 18 years of age, the main reform would, in time, be accomplished.

"The changes which ought to be made immediately in the programs of American secondary schools, in order to correct the glaring deficiencies of the present programs, are chiefly the introduction of more hand, ear, and eye work, such as drawing, carpentry, turning, music, sewing, and cooking; and the giving of much more time to the sciences of observation—chemistry, physics, biology, and geography, not political, but geological and ethnographical geography."

We may well feel satisfaction in noting that the admission requirements which we adopted a few weeks previous to the publication of this bulletin are the virtual embodiment of the ideal here set forth. If difficulties persist, we may take additional courage from the statement in the same bulletin by Ernesto Nelson, Director of Secondary Education, Argentina:

"Considering that Dr. Eliot's plea is being duplicated in every civilized country of the world, and that it is not a new plea, it does seem wonderful that the realization of the ideal it expresses should still demand the combined efforts of the foremost educators of all lands."

Although the State Board of Education did not propose the new law contemplating the standardization of normal schools in certain respects, it has been interested to find that the measure seems to be in accord with the needs and tendencies of the time in the development of educational systems. Commissioner P. P. Claxton of the United States Bureau of Education says in his Letter of Transmittal to Bulletin 10, 1916, entitled "Problems Involved in Standardizing State Normal Schools":

"Because of the large expenditures for normal schools and a growing appreciation of the importance of their place in our systems of public education, there is an increasing general desire for some intelligent accounting of their organization and work."

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In the body of the bulletin similar statements are made, as the result of experience and investigation. Among these are the following:

Chapter IV, Section I, "A Study of State Normal School Control." Conclusion I:

> "The results of any study of this nature are only further evidence, but not unquestioned, of the general tendency toward administrative centralization. The tendency of recent legislation is evidence of the general movement to centralize responsibility and power in normal school control, and, in fact, in all educational matters."

President G. E. Maxwell, of the Winona State Normal School, of Winona, Minn., summarizes the advantage of control by a single state board for normal schools, in the paragraph:

> "Our unit board for all normal schools has proved a very excellent arrangement. It serves to bring a well-conceived and harmonious budget to the legislature, which has not failed in several sessions to appropriate every cent asked for. It unifies the schools, prevents unsafe and disorganizing forms of competition for students, maintains uniformity of standards of admission, instruction and graduation."

Mr. Charles D. Hine, secretary of the Connecticut state board, says, of a different condition:

> "There is no state supervision of the normal schools. The principals substantially control the schools. They are not in accord except in the strong purpose to be unmolested."

Commissioner of Education David Snedden, in commenting on the Massachusetts system, says:

> "My conviction is that the training of the teachers for the public schools of any particular state should be under one authority, even though several schools distributed through the state are devoted to the work. It might be well to have local advisory committees of citizens."

In the introduction by Charles Hubbard Judd, director of the School of Education of the University of Chicago, he says:

> "Costs of educational organizations are so high and the volume of educational activity is so great that society is demanding as never before a reasonable accounting. In the meantime, the scientific methods of studying educational results have been so far perfected that the inquiry into educational efficiency can be made most pointed. Normal schools can not longer be isolated, even if they will. Society at large is interested in them as in other institutions."

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The president of the Carnegie Foundation has stated that

> "Little by little the states of the nation are realizing the oneness of the educational undertaking which faces them and are discovering that they can expect to cope successfully with it only by creating a skillful and mobile central authority to operate and control the entire undertaking. Of this great single educational enterprise in each state, the portion that is most vital, that overtops all else in its decisive importance, is that of selecting and training teachers. The solution of the state's problem as a whole is measured largely by the solution of this portion of the problem. It is emphatically a state task today and will doubtless permanently remain so."

California has reason to be proud of her normal schools, and of her generosity in providing, equipping and supporting them. Our eight California normal schools represent an investment of $2,696,149. Their total annual budget for 1915–1916 was $995,508.98. Their faculties numbered 267, one school alone having between 90 and 100. They had in training last year 7,789; 3,163 in the model and training schools and 4,626 in the normal departments. This number is amply sufficient to provide trained teachers for the elementary schools of the state—a happy condition to which few Eastern states approximate.

In the words of our president: "A larger percentage of the teachers of California than any other state have had the advantage of normal training, and this fact is without doubt largely due to the efficiency of our normal schools and the superior advantages they offer."

Respectfully submitted,

MARY G. BARNUM,
M. B. HARRIS,
GEORGE W. STONE.

BIENNIAL REPORT OF THE COMMITTEE ON CREDENTIALS.

To the Honorable State Board of Education:

The scope of the work of the Committee on Credentials has been greatly increased during the last two years. First, as a matter of convenient reorganization, three committees were consolidated, and the credential committee was given charge of health and development certification, examinations, and life diplomas and documents.

Second, as a result of amendatory legislation (§1519, Fifth, *c* and *d*) most of the difficult and perplexing work of providing credentials for teachers of special subjects passed from the offices of fifty-eight county boards to the office of the State Board of Education. The credential

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committee, the board, and, most of all, the commissioners, have felt the burden and borne it sturdily. When standards have been established, methods of investigation determined, and institutions accredited, it is hoped that county boards will pass directly on the qualifications of most applicants for special certificates, as they do on those of most applicants for high school certificates. This hope may be deferred and many cases continue to require individual consideration by the state board, because of the diversity of desirable qualifications in special subjects and the introduction of new courses in up-to-date schools. To facilitate matters by making it possible for two committees to work simultaneously, applications for credentials in special subjects will henceforth be considered by the Vocational Committee. (See the report of the Vocational Committee, page 199, and Regulations Governing Educational Institutions Accredited to Recommend Individuals for Special Certificates and Certification of Teachers of Special Subjects, page 259.)

STATE BOARD HIGH SCHOOL CREDENTIAL.

In connection with high school credentials, there have been several gratifying developments of general interest, which compensate for the steady grind of exacting detail—the reviewing of applications during committee and board meetings and the interviewing of applicants at very frequent intervals between, at home and office.

One encouraging fact is the increasing number of California teachers who consult the committee and high school commissioner, and, in consequence, pursue advance studies, raise their certification and increase their usefulness; elementary teachers add a year and secure intermediate permits; or three years and secure secondary credentials; or, having bachelor's degrees, pursue summer sessions, Saturday classes or correspondence courses, and complete the requirement for secondary certification. Special teachers with college equipment add necessary academic graduate credits and secure full secondary certification to meet the needs and opportunities of the small high school. This sort of ambitious effort augurs well for the schools of California; the growing teacher, the teacher who is also a student and maintains an eager student attitude with her classes has a quickening influence and unique power over them. The new high school laws and the high school commissioner's keen and kindly supervision have afforded opportunity and reward for such effort, and the commissioner has excellent practical devices, as well. For instance, the high school reports and directory require statements of exact certification, subjects taught and subjects allowed on certificates, if special. The classification accompanying every teacher's name is a powerful stimulant. (A, full certification;

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B, special certification; C, temporary certification; D, elementary certification.)

Another welcome feature is the increasing evidence that high school education is being made more responsive to community and life needs through agencies recently set in operation and under the guidance of the commissioners and the board—through their approval of high school courses of study, through the resulting legal recognition of industrial and vocational courses, and through certification of special and vocational types.

Standard raised.

Particularly gratifying to the board and its committee have been expressions of confidence and praise received from educational authorities for strictly maintaining a high standard in the issuance of state board high school credentials and for taking several steps in advance during the last two years, as follows:

First, work done in summer sessions has been scrutinized, as well as that done during the semesters of a college year. Only advanced courses of junior, senior and graduate rank may be counted toward the advanced work required for the credential.

Second, the word "equivalent" in the requirements has been a wide door of hope to applicants—often false and leading down to disappointment. This provision of equivalents has been strictly interpreted and a safe plan of procedure instituted. Wherever the candidate does not hold an academic degree, the committee has required that his record of training and verifying evidence be submitted to the education department of one of the accredited universities; the committee has accepted the advice of these authorities in reference to the acceptability and adequacy of the candidate's preparation; usually persons with bachelor's degrees from unlisted institutions are required to secure a recognized rating in this way. "Equivalents" for graduate credit are often submitted to the head of the graduate department in an accredited university; an accurate evaluation is thus secured for credentials from foreign or little known institutions and for any intricate or unusual evidence.

Third, the committee has declined to count more than six units of work in special branches toward the half year of postgraduate work required of those who hold the bachelor's degree.

Fourth, the committee has declined to accept any courses in law, medicine and theology as meeting the requirement of postgraduate work except courses so general in their nature that they might be accepted as nonprofessional work.

Fifth, the half year of postgraduate work is construed by the committee to mean a full semester of credit according to the rules for

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full credit in the institution where the work is taken, or two full summer sessions according to the rules for maximum summer session credit in the institution where the work is taken.

Sixth, the policy of the committee will hereafter be to require all applicants for the state board high school credential, whose degrees were granted before 1895, to present evidence of recent teaching experience in institutions of high school grade, or at least six units of advanced work of collegiate grade, within five years preceding the date of the application.

The policy of the committee will hereafter be to limit to two years all high school credentials granted to candidates who have not had (*a*) at least 20 months of successful experience in teaching in California, and (*b*) at least 20 months of successful experience in teaching in secondary schools.

Number of state board high school credentials issued: July 1, 1914, to June 30, 1916, 349.

REVISED RULES GOVERNING HIGH SCHOOL CERTIFICATION BY COUNTY BOARDS OF EDUCATION.

Finally, and of far-reaching effect, by revising the rules governing high school certification by county boards of education the board has greatly promoted the professional training of teachers.

It has encouraged and aided in every possible way the establishment of the University High School for supervised practice teaching, and is interested in the outlook for better practice teaching facilities at Stanford University.

It has adopted the following provisions and amendments to the previous regulations:

> The regulations governing the issuance of high school certificates in this state, adopted June, 1914, and published as Bulletin 5, are amended as follows:
>
> *First*—Amend page 4, section 2, of Bulletin 5, to read as follows: "*Full Regular Work.* The department of education of the institution in which the graduate work is done shall define what constitutes full regular work, referred to in requirement two."
>
> *Second*—Amend page 5, section 7, to read as follows: "*Basis of Recommendation.* The department of education of each university shall fix the standard of requirement in the several subjects, and each program as a whole must be approved by the Department of Education."
>
> *Third*—On page 7, section 3, after the period in line 5, insert the following sentence: "All recommendations granted to candidates who have not had at least 20 months experience in teaching shall be limited to expire two years after the date of issuance, and shall be renewed only upon recommendation of the State Board of Education.

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"In recommendations for the high school certificate issued in accordance with III, 5 above, the university, through its recorder or registrar, shall vouch for the undergraduate work of the candidate; the head of the department of education in the university shall vouch for the courses in education and the state librarian shall vouch for the postgraduate work.

"A recommendation granted by any approved graduate school, other than the University of California, Leland Stanford Junior University and the University of Southern California, shall not be valid unless approved on its face by the Commissioner of Secondary Schools."

Fourth—Insert after paragraph 4, page 6, the following:

"(5) Holders of bachelor's degrees granted by the University of California, Leland Stanford Junior University and the University of Southern California, who have completed the required fifteen units of work in education, including practice teaching, and who have completed one major and one minor in subjects taught in the high schools of the state, may elect to spend such year in postgraduate study in the California State Library School, following a course especially selected for college graduates preparing for high school certification in this state, provided that each candidate entering the California State Library School shall first secure the approval of the head of the department of education of the university from which he expects to be recommended for the high school certificate.

"A major is hereby defined as not less than twenty-four units of work in a subject, of which twelve units must be in advanced courses.

"A minor is hereby defined as at least six units of work in advanced courses.

"Only advanced courses taken during the junior, senior and graduate years shall be counted toward the advanced work required."

These provisions have the effect of increasing professional requirements and making them more specific; of giving the appropriate departments of education control over the programs of prospective teachers; of encouraging the development of real professional schools of education with dignity at least equal to those of law, medicine, engineering and theology.

Probably the greatest additional safeguard is that just established, requiring a probationary period of two years, and under a limited certificate, for all teachers who have not had two years of successful experience in California, in the secondary schools, and in recent years. This will involve considerable "follow-up" work for the secondary commissioner and his office, but it will be a most important service; will put a premium on well-doing, and eliminate the unsuccessful and unfit.

In consequence of these standards and provisions and the thorough way they are administered, we have excellent reason to believe that the

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high school teachers of the state are better trained than they were a few years ago, and better trained than those of any other state.

EXAMINATIONS FOR STATE BOARD HIGH SCHOOL CREDENTIAL.

In accordance with the regulations of the board, examinations for the state board high school credential have been held annually, during the month of May. Examinations were conducted at Los Angeles and Sacramento simultaneously. All questions used in the examinations were prepared by experts, who also graded the papers. Twenty-six persons appeared for examination during the biennial period. Of this number twenty-one were successful and were granted the state board high school credential. Five failed to attain the minimum standing fixed by the board and were denied the credential.

LIFE DIPLOMAS AND DOCUMENTS.

In accordance with special provisions in the law governing the method by which a teacher may secure a life diploma of the different grades issued, or a document, the committee has submitted carefully prepared lists of applications recommended by county boards of education in the state, for ratification by the State Board of Education. The process is formal for the most part, involving accurate checking of experience and certification. In connection with life diplomas in special subjects, however, a new and important requirement has been made, to the effect that county boards should recommend for life diplomas in special subjects only those teachers whose equipment meets the present increased standard of the State Board of Education for elementary and secondary certification in special subjects. Otherwise a life diploma, which is good in any county, might be issued in accordance with a low or inadequate standard which may formerly have prevailed in some one county.

Number of life diplomas granted:

June 30, 1914, to July 1, 1915	490
June 30, 1915, to July 1, 1916	884
Total	1374

HEALTH AND DEVELOPMENT CERTIFICATION.

Health and development certification has continued without change of policy. While the law under which these credentials are granted is far from perfect, it would be extremely difficult to find improvements on which all the patrons of the public schools would agree. Any attempt to legislate on the subject would probably cause useless controversy. Moreover, the existing law is permissive only, and sufficiently elastic to permit local authorities to meet local needs. Recent investigation and conference have shown that this law permits much valuable work under the control of school authorities which would otherwise be

lost or done under the control of boards of health. The committee recommends, therefore, that the law be not changed at this time.

The number of Health and Development Certificates granted between July 1, 1914, and June 30, 1916, was 34.

NO SPECIAL CREDENTIAL FOR SCHOOL NURSES.

The committee recommends further that no special certification for school nurses be instituted, since we are informed on excellent authority that local school boards and boards of trustees may legally and confidently employ nurses who are registered by the California State Board of Health, Bureau of Registration of Nurses.

Respectfully submitted.

E. P. CLARKE,
C. A. WHITMORE,
MARY G. BARNUM.

REPORT ON SPECIAL CERTIFICATION BY COMMITTEE ON VOCATIONAL EDUCATION.

To the Honorable State Board of Education:

The 1915 session of the California legislature placed upon the State Board of Education responsibility for certification of teachers in special subjects. This was a task not sought by the board. Prior to that time certificating was done by county boards of education on educational requirements of their own making. The result was a wide variation in standards—so wide, in fact, that the certificates of one county frequently would not be recognized by the educational authorities of another. For years this situation had proved unpleasant to teachers and unprofitable to education. In general, no distinction was made between the elementary and secondary grade of certificate, and the average educational requirement was two years preparation beyond a secondary school. Only San Francisco, Los Angeles, and Alameda counties approximated the present standards of the state board, which are three years preparation beyond the high school for the elementary certificate, and four years for the secondary certificate, one-half of which in each case must be in the special subject and the pedagogy thereof.

With the rapid spread of special subjects in school curriculums, the situation regarding special certificates became increasingly difficult, but no solution offered until the organization of the present board presented the opportunity for shifting the entire burden of special certification upon a central authority. The proposal to transfer special certification to the state board originated with the California Council

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of Education and was endorsed by the convention of city and county school superintendents held at Riverside in the fall of 1914. The necessary bills were framed and urged upon the legislature by representatives of the teaching profession of the state.

STUDY OF PROBLEM.

After the passage of the law, and before making regulations covering the granting of credentials in special subjects, the board authorized a study of the problem by the three State Commissioners of Education, and gave over an entire week's session of the board in August, 1915, to hearing views of the state commissioners, the state normal school presidents, and city and county school superintendents.

The state board also consulted national and eastern educational authorities on the problem, among whom were P. P. Claxton, United States Commissioner of Education; Carroll G. Pearse, president of the board of trustees of the National Educational Association and president of the Milwaukee Normal School; and Elmer E. Brown, formerly head of the department of education of the University of California, and now chancellor of the University of New York City. These authorities admitted that the state board was working in virgin educational soil, and that there were no established standards for special teacher preparation which it might consult with any degree of assistance or satisfaction. From the evidence received it appeared that California in 1915 was again engaged in pioneering—this time in education, as in 1849 our people pioneered for gold, and in more recent years have lead the nation in blazing a way in social and governmental reforms.

The board found a strong demand for a higher standard of special teacher preparation than had prevailed generally in the past, and a need for recognition of two kinds of special teachers: first, the practical man, taught in the school of experience, who would give instruction of a strictly vocational character; and, secondly, the teacher whose preparation was largely theoretical and academic, and who would give instruction of a prevocational or cultural type.

STANDARDS ESTABLISHED.

The board found that through the establishment of standard educational requirements, and the accrediting thereunder of a limited number of high grade institutions preparing special teachers, that the board could preserve standardization, at the same time complying with that section of the law which provides that county boards of education may grant special credentials under rules and regulations made by the state board. County boards, therefore, are now granting county certificates to such candidates as present original credentials from the proper

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authorities of educational institutions authorized to certify to the qualification of such individuals, providing their credentials first had been countersigned by the secretary of the state board.

To facilitate the intelligent and rapid handling of applications for special credentials, the board established, for both the elementary and secondary grade, seven general types of credential, as follows: Manual and fine arts, technical arts, household arts, vocational arts, commercial subjects, physical culture, and music. All candidates who are unable to meet the standard requirements, and thus secure their certificate directly from the local county boards of education, are obliged to present their cases to the State Board of Education.

In detail, the regulations covering educational institutions accredited to recommend individuals for special certificates, and certification of teachers of special subjects, are contained in Bulletins 10 and 11, attached to this report as addenda.

WORK OF THE COMMISSIONERS.

As special teachers are closely allied with vocational instruction, the details of this work were assigned to the Commissioner of Vocational Education, who, cooperating with the other state educational commissioners and the Superintendent of Public Instruction, prepares digests and examines the evidence of preparation and educational equivalents submitted by each applicant, before presenting the cases to the committee on special credentials for final action.

The consideration of special credentials is made an exceedingly intricate and technical problem by the vast variety of evidence submitted, such as diplomas and study courses of a large number of educational institutions, a wide range of occupations, private instruction, practical experience, teaching experience, foreign travel and personal research. It has involved the examination of the standing of educational institutions, the verification of evidence and securing letters of a confidential nature regarding the character, accomplishments and success of each applicant. The amount of this detail, with an average of 500 applications per quarter, can readily be imagined. Considering the intricacies of the problem, the success of the board in maintaining standards is a matter for congratulation. The board has granted credentials, unlimited as to time, only in cases where both preparation and teaching experience are absolutely clearly proven. All other cases are given a limited credential, from one to two years, which permits examination of actual performance in school before the final, unlimited document is issued. In music and art, consideration of equivalents has been extremely difficult and the state board has resorted, in several cases, to examination by recognized musical supervisors, to determine the probable ability of the applicant to teach public school music.

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The labor involved has been enormous, taking up in routine work altogether too much time of a commissioner whose constructive services are needed in the field, fostering and elevating the direct-to-life courses which are the special province of his office, and which year by year are becoming a more important and vital part of common school education. We believe that the flood tide of applications for special credentials now has passed, and that in the future the burden will be less onerous. Some idea of the responsibility placed upon the state board and commissioners in the handling of special credentials can be gathered from the fact that since the new law became effective over 2,000 applications have been examined and acted upon, although only 841 individuals have been granted certificates.

TABLE OF CREDENTIALS ISSUED.

Manual of Fine Arts Type Subjects.

Elementary.

Manual Training	10
Instrumental Drawing	7
Arts and Crafts	9
Free-hand Drawing, Painting and Design	19

Secondary.

Woodwork	97
Instrumental Drawing	105
Arts and Crafts	98
Free-hand Drawing, Painting and Design	102
Ironwork	34

Technical Arts Type Subjects.

Elementary.

Instruction of Deaf Children	3
Oral and Dramatic Expression	5
Agriculture	1

Secondary.

Engineering	27
Instrumental Drawing	13
Applied Electricity	4
Machine Design	2
Agriculture	21
Farm Mechanics	3
Landscape Design	1
Architecture	5
Oral and Dramatic Expression	24
Library Craft, Technique and Use	21
Journalism	3
Advertising	1
Machine-shop Work	8
Machine Design	2

Household Arts Type Subjects.

Elementary.

Household Science and Economy	13
Household Art and Economy	13

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Secondary.

Household Science and Economy	72
Household Art and Economy	81
First Year Sewing	1
Sewing	4
Art Needlework	1
Millinery	1

Commercial Type Subjects.

Elementary.

Stenography and Typing	4
Bookkeeping	4
Penmanship	3

Secondary.

Stenography and Typing	135
Bookkeeping	114
Penmanship	34
Banking and Finance	6
Salesmanship	7
Commercial Law	2
Commercial Spelling	1
Typing	1

Physical Culture Type Subjects.

Elementary.

Physical Education and Training	3
Play and Playground	6
Gymnasium	3
Athletics	4

Secondary.

Physical Education and Training	54
Play and Playground	34
Gymnasium	10
Athletics	52
Cadet Drill	15

Music Type Subjects.

Elementary.

Vocal Music	20
Instrumental Music	18
Orchestral Music	11
Band Music	2

Secondary.

Vocal Music	138
Instrumental Music	38
Orchestral Music	88
Band Music	14
Choral Music	4

Vocational Arts Type Subjects.

Elementary.

Agriculture	1
Gardening	1
Dressmaking	2
Sewing	3
Needlework	1
Cooking	1

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Secondary.

Bench and Cabinet Work	16
Woodworking Machinery and Wood Manufacture	11
Ironwork	1
Carpentry	15
Instrumental Drawing	3
Wood Turning	3
Pattern Making	8
Free-hand Drawing	1
Molding and other Foundry Work	1
Machine Shop Work	7
Automobile Repairing and Construction	5
Machinery Installation, Care and Repair	1
Blacksmithing	1
Applied Electricity	4
Agriculture	2
Shoemaking	1
Printing	10
Bookbinding	1
Journalism	3
Photography	1
Bookkeeping	1
Commercial Economics	1
Commercial Law	1
Dressmaking	11
Sewing	9
Tailoring	7
Needlework	3
Dress and Costume Design	2
Millinery	12
Electrical Salesmanship	1
Mechanical Drafting	1
Engineering	2
Engine and Machine Construction	1
Installation of Machine and Shop Equipment	1
House Designing	1
Concrete and Cement Work	1
Machine Design	1

Summary.

The above segregation does not represent the number of credentials granted by the State Board of Education. In many instances two or more subjects were included in a single credential. The actual number of special credentials of each type granted is as follows:

	Elementary	Secondary
Manual and Fine Arts	17	131
Technical Arts	7	53
Household Arts	11	65
Commercial	4	129
Music	17	141
Physical Culture	5	52
Vocational Arts	5	60
Manual and Fine Arts and Vocational Arts	--	15
Manual and Fine Arts and Household Arts	1	9
Manual and Fine Arts and Physical Culture	3	6
Manual and Fine Arts and Technical Arts	--	21
Manual and Fine Arts and Commercial	1	13

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	Elementary	Secondary
Manual and Fine Arts and Music	8	18
Technical Arts and Physical Culture	1	17
Music and Commercial	--	4
Technical Arts and Music	1	---
Music and Physical Culture	--	1
Physical Culture and Commercial	--	3
Household Arts and Music	--	4
Household Arts and Physical Culture	--	2
Household Arts and Commercial	1	2
Technical Arts and Vocational Arts	--	5
Household Arts and Vocational Arts	--	1
Manual and Fine Arts, Technical Art and Vocational	--	1
Manual and Fine Arts, Commercial and Vocational	--	1
Manual and Fine Arts, Technical Arts and Physical Culture	--	1
Technical Arts, Commercial and Physical Culture	--	1
Commercial, Physical Culture and Music	--	1
Music, Technical Arts and Physical Culture	--	2
Total	82	759

A number of temporary special credentials have been reissued; also, in a few cases, both elementary and secondary credentials have been granted to the same individual, and in some other cases a second credential has been granted in order to qualify the individual to teach a subject not included in the previous credential issued. Thus the total number of credentials listed above does not represent the total number of individuals having received special credentials, but somewhat exceeds that number.

The standardization of requirements for special teacher certification has received cooperation and encouragement from the state normal schools and California universities. Knowing what they may depend upon in the way of standards, several of these institutions have introduced courses for preparation of special teachers in accordance with state board requirements, while other have augmented courses already existing. The special teacher no longer drifts into her specialty by educational or temperamental accident. It is now more difficult to attain to a special certificate than it is to secure an elementary certificate. While a student, properly prepared in the high school, may receive an elementary certificate after two years normal instruction, the elementary special teacher must spend three years, and for a secondary special must spend four years, in her educational preparation.

The problem of special certification and vocational education is handled fully in the report of Dr. E. R. Snyder, Commissioner of Vocational Education, who has had the most intimate work in connection therewith. In general, the situation has been vastly improved by

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the standardization enforced by the State Board of Education, and educators appear to be satisfied with the manner in which a difficult problem has been solved.

CHAS. A. WHITMORE,
AGNES RAY,
M. B. HARRIS, Chairman,
Committee on Vocational Education.

REPORT OF COMMITTEE ON ACCREDITATION.

To the Honorable State Board of Education:

In addition to the investigation of the fitness of certain schools outside the state to receive the recommendation of the State Board of Education, as required by law, this committee has made investigations concerning the qualifications of institutions both in California and elsewhere to recommend candidates for certification in special subjects.

There are four classes of schools requiring investigation:

First, graduate schools, the credits of which may be accepted for the graduate work required for regular high school certificates; second, normal schools, the diplomas of which may be accepted in granting elementary certificates; third, kindergarten training schools, the graduates of which may receive kindergarten primary certificates; fourth, institutions authorized to certify to the fitness of persons to receive special certificates.

This work obviously requires expert professional skill. Therefore, all investigations have been placed in the hands of the commissioners of the board—the Commissioner of Secondary Schools taking charge of those pertaining to graduate schools, the Commissioner of Elementary Schools taking charge of those pertaining to normal schools and kindergarten training schools, and the Commissioner of Vocational Education directing investigations of institutions authorized to certify to the fitness of persons to receive special certificates.

APPROVED GRADUATE SCHOOLS.

Approved graduate schools include the University of California, Leland Stanford Junior University, the University of Southern California (for graduate work done after 1911–12), and such other universities or colleges, belonging to the Association of American Universities, or Association of State Universities, as have been approved by the State Board of Education because offering graduate academic and profes-

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sional preparation equivalent in quality to that offered by the University of California. The institutions so approved are as follows:

Indiana University, Bloomington, Ind.
University of Michigan, Ann Arbor, Mich.
University of Pennsylvania, Philadelphia, Pa.
University of Wisconsin, Madison, Wis.
Princeton University, Princeton, N. J.
University of Virginia, Charlottesville, Va.
Yale University, New Haven, Conn.
University of Illinois, Urbana, Ill.
University of Missouri, Columbia, Mo.
University of Minnesota, Minneapolis, Minn.
Iowa State University, Iowa City, Ia.
University of Kansas, Lawrence, Kan.
Catholic University of America, Washington, D. C.
University of Chicago, Chicago, Ill.
Clark University, Worcester, Mass.
Columbia University, New York City.
Cornell University, Ithaca, N. Y.
Harvard University, Cambridge, Mass.
Johns Hopkins University, Baltimore, Md.
University of Nebraska, Lincoln, Neb.

The following institutions are accredited with the proviso that this accreditation shall not extend to postgraduate work done prior to the academic year 1911–12:

Ohio State University, Columbus, Ohio.
University of Washington, Seattle, Wash.
University of Colorado, Boulder, Colo.
University of Texas, Austin, Tex.

NORMAL SCHOOLS.

Article XVI, section 1775, of the Political Code, states that county boards of education may, without examination, grant certificates to holders of California state normal school diplomas, San Francisco city normal school diplomas heretofore granted, and other normal school diplomas; provided, that the State Board of Education of this state shall have recommended the normal school issuing said diploma as being of equal rank with the state normal schools of California.

The Committee on Accreditation, feeling that the time had arrived for placing certain limitations upon the accreditation of institutions outside the state, recommended that hereafter it shall be the policy of this board to make annual revision at the March meeting of the list of accredited normal schools, the effect of which annual revision shall be to advance the date of accreditation so that diplomas showing graduation earlier than ten years prior to the beginning of the current school year shall not be recognized as bases for certification.

This recommendation was made by the committee and accepted by the board in March, 1916, and the present list of accredited normal schools is printed in accordance with it.

In September, 1916, after the adoption by the board of rules and

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regulations for the government of the California state normal schools, the Committee on Accreditation recommended that the Commissioner of Elementary Schools be requested to send a copy of the State Board requirements regarding California state normal schools to each normal school on the present accredited list of normal schools; that she notify the president of each school that if continued accreditation for the school is desired, it must meet the requirements of California state normal schools not later than July 1, 1918; that evidence in the form of courses of study maintained, lists of textbooks used and all other necessary information showing that the school is meeting the requirements called for, be submitted to the State Board of Education not later than January 1, 1918. If such action is not taken by the president it will be understood that there is no desire to have the school reaccredited, and it will not be listed among accredited California institutions; that in the case of institutions applying to be accredited, the Commissioner of Elementary Schools be instructed to send to the president or the principal of the school a copy of the state board requirements regarding accreditation of state normal schools and kindergarten training schools, requesting that sufficient evidence be forwarded showing that these requirements are being met by the institution desiring to be accredited, before the application will be considered.

Authorized by the board to do so, the commissioner forwarded a copy of the rules and regulations governing California state normal schools to the presidents of accredited normal schools and duly instructed them concerning conditions which would make possible the reaccreditation of their institutions; and institutions applying to be accredited have been informed of the new requirements which must be met.

LIST OF ACCREDITED NORMAL SCHOOLS.

Arizona:
- Flagstaff (1906).
- Tempe (1906).

Canada:
- Fredericton, N. B. (1906 to 1907).
- London, Ont. (1906 to 1907).
- Ontario Normal College, Hamilton (1906 to 1907).
- Ottawa, Ont. (1906 to 1907).
- School for Teachers, Macdonald College, formerly McGill Normal, Quebec (1906 to 1907).
- Toronto, Ont. (1906 to 1907).
- Truro, Nova Scotia (1906 to 1907).
- Winnipeg, Manitoba (1907 only).

Colorado:
- State Teachers' College, Greeley (1906).

Connecticut:
- Danbury (1909).
- New Britain (1906).
- New Haven (1906).
- Willimantic (1906).

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District of Columbia:
The James Ormond Wilson Normal School, formerly Washington City Normal No. 1 (1906).

England:
Normal Dept., Edge Hill Training College, Liverpool (1906).

Idaho:
Albion (1911).
Lewiston (1911).

Illinois:
Chicago Normal (1906).
Eastern State Normal, Charleston (1906).
Northern State Normal, DeKalb (1906).
Southern State Normal, Carbondale (1906).
State Normal University, Normal (1906).
University of Chicago, Normal Dept. (1906).
Western State Normal, Macomb (1906).

Indiana:
Normal Training School, Indianapolis (1913).
Terre Haute (1906).

Iowa:
College of Education, Drake University, Des Moines (1906).
State Teachers' College, formerly State Normal, Cedar Falls (1906).

Kansas:
Emporia (1906).
Fort Hays Normal, Fort Hays (1911).

Kentucky:
Western State Normal, Bowling Green (1914).

Louisiana:
Natchitoches (1906).

Maine:
Aroostook State Normal, Presque Isle (1906).
Castine (1906).
Farmington (1906).
Gorham (1906).

Maryland:
Baltimore (1906).
Baltimore Training School for Teachers (1907).
Normal Dept. Washington College, Chestertown (1909 to 1912).

Massachusetts:
Boston (1906).
Bridgewater (1906).
Framingham (1906).
Fitchburg (1906).
Hyannis (1906).
Lowell (1906).
North Adams (1906).
Salem (1906).
Westfield (1906).
Worcester (1906).

Michigan:
Central State Normal, Mt. Pleasant (1906).
Northern State Normal, Marquette (1906).
Wales C. Martindale Normal Training School for Teachers, formerly Washington Normal, Detroit (1910).
Western State Normal, Kalamazoo (1906).
Ypsilanti (1906).

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Minnesota:
Duluth (1906).
Mankato (1906).
Moorhead (1906).
St. Cloud (1906).
St. Paul Normal, St. Paul (1908).
Winona (1906).

Missouri:
Cape Girardeau (1906).
Kirksville (1906).
Maryville (1907).
Springfield (1907).
School of Education, University of Missouri, formerly Teachers' College, Columbia (1908).
Warrensburg (1906).

Montana:
Dillon (1906).

Nebraska:
Dept. of Education, University of Nebraska, Lincoln (1906).
Kearney (1906).
Peru (1906).
Teachers' College, Nebraska Wesleyan University, University Place (1909).
Wayne (1911).

New Hampshire:
Keene (1913).
Plymouth (1906).

Nevada:
Normal Dept., State University, Reno (1906).

New Jersey:
Montclair (1909).
Trenton (1906).

New Mexico:
Normal Dept., University of New Mexico, Albuquerque (1908).
Normal University, Las Vegas (1906).
Silver City (1908).

New York:
Albany (1906).
Brockport (1906).
Buffalo (1906).
Cortland (1906).
Fredonia (1906).
Geneseo (1906).
New Paltz (1906).
Hunter College of the City of New York, formerly New York City Normal (1906).
Oneonta (1906).
Oswego (1906).
Plattsburg (1906).
Potsdam (1906).
Teachers' College, Syracuse University (1909).
Teachers' College, Columbia University (1906).

North Carolina:
State Normal and Industrial College, Greensboro (1906).
North Dakota:
Teachers' College, University of North Dakota, University (1909).

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Ohio:
- Baldwin-Wallace University, Normal Dept., Berea (1907).
- City Normal, Columbus (1909).
- City Normal, Cleveland (1909).
- City Normal, Dayton (1907).
- City Normal, Toledo (1909).
- State Normal College of Ohio University, Athens (1906).

Oklahoma:
- Central, Edmond (1906).
- East Central, Ada (1909).
- Northeastern, Tahlequah (1909).
- Northwestern, Alva (1908).
- Southeastern, Durant (1909).
- Southwestern, Weatherford (1909).

Oregon:
- Monmouth (1912).

Pennsylvania:
- Bloomsburg (1906).
- California (1906).
- Clarion (1906).
- East Stroudsburg (1906).
- Edinboro (1906).
- Indiana (1906).
- Kutztown (1906).
- Lock Haven (1906).
- Mansfield (1906).
- Millersville (1906).
- Philadelphia Normal for Girls (1906).
- Shippensburg (1906).
- Slippery Rock (1906).
- West Chester (1906).

Rhode Island:
- Providence (1906).

South Carolina:
- Winthrop Normal and Industrial College, Rock Hill (1906).

South Dakota:
- Northern Normal and Industrial School, Aberdeen (1912).
- Spearfish (1914).

Tennessee:
- Peabody College for Teachers, Nashville (1906).

Utah:
- School of Education, University of Utah, Salt Lake City (1906).

Washington:
- Bellingham (Whatcom) (1906).
- Cheney (1906).
- Ellensburg (1906).

Wisconsin:
- LaCrosse (1909).
- Milwaukee (1906).
- Oshkosh (1906).
- Platteville (1906).
- River Falls (1906).
- Stevens Point (1906).
- Superior (1906).
- Whitewater (1906).

Wyoming:
- Normal Dept., University of Wyoming, Laramie (1909).

NOTE.—Accreditation of any normal school by the State Board of Education carries with it accreditation of the kindergarten department connected therewith.

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KINDERGARTEN TRAINING SCHOOLS.

In making rules and regulations for the government of the normal schools of the state, as required by law, under section 1519 of the Political Code, the kindergarten courses in the normal schools were standardized by the State Board of Education.

In order that kindergarten training schools in California and elsewhere already accredited might be given opportunity to meet these requirements the committee on accreditation recommended that the Commissioner of Elementary Schools be requested to send a copy of the state board requirements regarding kindergarten courses in California state normal schools to each kindergarten training school on the present accredited list of kindergarten training schools, and that she notify the principal of each kindergarten training school that if continued accreditation for the school is desired, it must meet the requirements of California state normal schools not later than July 1, 1918; that evidence in the form of courses of study maintained, lists of textbooks used, and all other necessary information showing that the school is meeting the requirements called for, be submitted to the State Board of Education not later than January 1, 1918. If such action is not taken by the principal it will be understood that there is no desire to have the school reaccredited, and it will not be listed among accredited California institutions; that in the case of institutions applying to be accredited, the Commissioner of Elementary Schools be instructed to send to the principal of the school a copy of the state board requirements regarding accreditation of state normal schools and kindergarten training schools, requesting that sufficient evidence be forwarded showing that these requirements are being met by the institution desiring to be accredited before the application will be considered.

This recommendation having been approved by the board was acted upon by the Commissioner of Elementary Schools.

In March, 1916, the Committee on Accreditation submitted to the board this resolution:

> *Resolved,* That hereafter, it shall be the policy of this board to make annual revision at the March meeting of the list of accredited kindergarten training schools, the effect of which annual revision shall be to advance the date of accreditation so that diplomas showing graduation earlier than ten years prior to the beginning of the current school year shall not be recognized as bases for certification.

The board approved the recommendation and passed the resolution. This resolution limits the number of kindergarten teachers of accredited kindergarten training schools, who may be certificated upon their diplomas.

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LIST OF ACCREDITED KINDERGARTEN TRAINING SCHOOLS.

California:
- Berkeley Kindergarten Training School, Berkeley (1909).
- Broadoaks Kindergarten Training School, Pasadena.
- California Kindergarten Free Normal Training School, San Francisco (1889).
- Golden Gate Kindergarten Association, San Francisco (1903). (Now a department of the San Francisco State Normal School.)
- Miss Barnard's Kindergarten Training School, Berkeley (formerly Oakland) (1903).

Canada:
- Toronto Normal Kindergarten Training School, Toronto (1906).

Colorado:
- Greeley State Normal, Kindergarten Training Department (1906).

Connecticut:
- New Britain State Normal, Kindergarten Training Department (1906).

England:
- Blackheath Froebelian School and Training College for Teachers, London, (1906).
- Edge Hill Training College, Kindergarten Department, Liverpool (1906).

Illinois:
- Kindergarten Collegiate Institute (formerly Free Kindergarten Association), Chicago.
- Chicago Froebel Association (1906). (Merged with Chicago Kindergarten Institute.)
- National Kindergarten College (formerly Chicago Kindergarten College) (1906).
- Chicago Kindergarten Institute (1906).
- Froebelian School, Longwood, Chicago (1906).
- University of Chicago, Kindergarten Training Department, College of Education (1906).
- Pestalozzi-Froebel Kindergarten Training School, Chicago (1907).

Indiana:
- South Bend Training School, South Bend (1906).
- Teachers' College for Training Kindergartners and Primary Teachers, Indianapolis (formerly Indiana Kindergarten and Primary Normal Training School) (1906).

Iowa:
- Drake University Kindergarten Training School, Des Moines (1906).
- State Teachers' College, Kindergarten Training Department, Cedar Falls (1906).

Kansas:
- State Normal, Kindergarten Department, Emporia (1906).

Kentucky:
- Free Kindergarten Association's Training School, Louisville (1906). (Now a department of Louisville Normal School.)

Massachusetts:
- Boston Normal School, Kindergarten Department (1906).
- Bridgewater State Normal, Kindergarten Department (1906).
- Garland Kindergarten Training School, Boston (1907).
- Kindergarten Training School, 82 St. Stephen street, Boston (1908).
- Miss Harriet Niel's (formerly Miss Fisher's) Training School for Kindergartners, Boston (1909).
- Miss Page's Normal Kindergarten School, Danvers (1907).
- Miss Wheelock's Kindergarten Training School, Boston (1906).
- Perry Kindergarten Normal School, Boston (1907).
- Westfield State Normal, Kindergarten Department (1906).

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Michigan:

Alma College, Kindergarten Department, Alma (1906).
Central State Normal, Kindergarten Department, Mt. Pleasant (1906).
Grand Rapids Kindergarten Association Training School (1906).
Kalamazoo State Normal, Kindergarten Department (1906).
Ypsilanti State Normal College, Kindergarten Training Department (1906).

Minnesota:

Duluth Normal, Kindergarten Training Department (1906).
Mankato Normal, Kindergarten Department (1906).
Minneapolis Kindergarten Association Normal School (1906).
St. Paul Teachers' Training School, Kindergarten Department (1906).
Winona State Normal School, Kindergarten Training Department (1906).

Missouri:

Froebel Kindergarten Training School, Kansas City (1909).
St. Louis Public School System, Kindergarten Training Department (1909).
Warrensburg State Normal, Kindergarten Training Department (1906).

Nebraska:

Omaha Public Schools, Kindergarten Training Department (1906).
Peru Public Schools, Kindergarten Training Department (1906).

New York:

Adelphi College, Kindergarten Department, Brooklyn (1906).
Buffalo State Normal, Kindergarten Training Department (1906).
Buffalo Kindergarten Association, Training Department (1906).
Cortland State Normal, Kindergarten Department (1906).
Ethical Culture School, Kindergarten Normal Department, New York City (1906).
Fredonia State Normal, Kindergarten Training Department (1906).
Geneseo State Normal, Kindergarten Department (1906).
New York Froebel Normal, New York City (1910).
Oswego State Normal, Kindergarten Department (1906).
Pratt Institute, Kindergarten Training Department, Brooklyn (1906).
Teachers' College, Columbia University, Kindergarten Department, New York City (1906).
Utica Kindergarten Training School (1906).

Ohio:

Cincinnati Kindergarten Association (1906).
Cleveland Kindergarten Training School (1906).
Columbus Kindergarten Training School (1906).
Dayton Normal School, Kindergarten Department (1907).
Law-Froebel Kindergarten Training School, Toledo (1908).
Oberlin Kindergarten Training Association (1906).

Oregon:

St. Helen's Hall, Portland (1907).

Pennsylvania:

Miss Hart's Training School for Kindergartners, Philadelphia (1909).
Philadelphia Training School for Kindergartners, Senior Course (1906).
Pittsburg Training School for Teachers, Kindergarten Training Department, formerly Pittsburg and Allegheny Free Kindergarten Association (1906).
Temple University, Kindergarten Department, Philadelphia (1906).

Rhode Island:

Providence State Normal, Kindergarten Training Department (1909).
The Froebel School, Providence (1906).

Texas:

Fort Worth Kindergarten Training School (1906).

Utah:

University of Utah, Kindergarten Training Department, Salt Lake City (1909).

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Washington:
Seattle Training School for Kindergartners (1908).

Wisconsin:
Milwaukee State Normal, Kindergarten Department (1906).
Superior State Normal, Kindergarten Department (1906).
Stout Training School for Kindergarten Teachers, Menominee (1906).
Wylie Training School, Madison (1906).

NOTE.—Accreditation of any normal school by the State Board of Education carries with it accreditation of the kindergarten department connected therewith.

INSTITUTIONS AUTHORIZED TO CERTIFY TO THE FITNESS OF INDIVIDUALS TO RECEIVE SPECIAL CERTIFICATES.

The Committee on Accreditation, working through the Commissioner of Vocational Education, had printed and distributed to the various schools giving courses in special subjects for the training of teachers, blank forms of application for accreditation in such subjects. A number of schools responded, requesting that they be accredited to recommend persons for certificates in certain of the special subjects outlined in Bulletin No. 10. After careful investigation the following institutions were authorized to certify to the fitness of persons who had met all of the requirements set forth in Bulletin No. 10 to receive special certificates. Only one of these institutions, Teachers College and Columbia University, was accredited to recommend candidates in all of these subjects. Outside of the state of California only universities, colleges and technical schools were accredited. Most of the schools listed below were accredited in only a few of the subjects listed in Bulletin No. 10:

LIST OF ACCREDITED INSTITUTIONS.

The following institutions are authorized to certify to the fitness of individuals to receive special certificates under such regulations and limitations as the State Board of Education has prescribed:

State Normal School, Chico, Cal.
State Normal School, Fresno, Cal.
State Normal School, Los Angeles, Cal.
State Normal School, San Jose, Cal.
State Normal School of Manual Arts and Home Economics, Santa Barbara, Cal.
University of California, Berkeley, Cal.
Leland Stanford Junior University, Stanford University, Cal.
College of the Pacific, San Jose, Cal.
California School of Arts and Crafts, Berkeley, Cal.
Mills College, Oakland, Cal.
California School of Mechanical Arts and the Lux School of Industrial Training, San Francisco, Cal.
Throop College of Technology, Pasadena, Cal.
Teachers College and Columbia University, New York, N. Y.
University of Wisconsin, Madison, Wis.
State Teachers College, Greeley, Colo.
Ohio University, Athens, Ohio.
University of North Dakota, University, N. D.

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University of Washington, Seattle, Wash.
Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa.
University of Oklahoma, Norman, Okla.
Simmons College, Boston, Mass.
Bradley Polytechnic Institute, Peoria, Ill.
Oregon Agricultural College, Corvallis, Ore.
Pratt Institute, Brooklyn, N. Y.
Stout Institute, Menominee, Wis.

Institutions recommending persons for certificates in special subjects must make such recommendation upon blank forms provided by this board. These recommendations must be countersigned by the executive secretary of the California State Board of Education, and each credential must bear on its back a record of the schooling and practical and teaching experience of the candidate. This record enables the official force to judge as to the value given by the institution to practical and teaching experience where they have been substituted in lieu of a certain amount of the collegiate requirement.

(Signed) M. B. HARRIS, *Chairman.*
MRS. O. SHEPARD BARNUM.
MARSHALL DEMOTTE.

REPORT OF THE COMMITTEE ON PUBLICITY.

To the Honorable State Board of Education:

The Publicity Committee was created for the purpose of disseminating to the people of California, through the public press, information concerning activities of the State Board of Education. The progress of education depends upon public sympathy and support, which can only be secured by knowledge of existing conditions and proposals for future improvement. While the larger matters before the board almost invariably reach the metropolitan papers, practically nothing appears in hundreds of country newspapers of California unless it is sent to them in homeopathic ready-to-print doses. The committee is sending occasional articles to a list of approximately 500 California papers of general circulation. During 15 months committee activity up to the end of the fiscal year, 6,250 slips of press matter have been sent out, containing 58 articles relative to the activities of the board and its commissioners.

CHAS. A. WHITMORE, Chairman,
E. P. CLARKE,
GEORGE W. STONE.
Committee on Publicity.

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REPORT OF THE LEGISLATIVE COMMITTEE.

Our biennial report of 1914, submitted prior to the legislative session of 1915, presented the legislation tentatively determined upon by this board, and stated its general policy of conservatism—of evolution and not revolution.

At the opening of the legislature, January 4, 1915, definite bills were prepared, covering the legislation desired, and were introduced as follows:

Senate Bill 236, establishing vocational schools.
Senate Bill 237, establishing classes for training vocational teachers.
Senate Bill 439, recognizing intermediate schools.
Senate Bill 444, providing uniform courses of study for normal schools.
Senate Bill 452, providing rural supervision.
Senate Bill 757, providing for special certification.
Senate Bill 819, establishing a county high school fund.
Senate Bill 820, securing principals' reports on high school texts.
Assembly Bill 444, securing high school principals' convention.
Assembly Bill 560, providing a library fund in cities.

All these measures carried in the legislature, the vocational education and the rural supervision bills meeting some serious opposition and submitting to much amendment. All received the Governor's signature except these two, the vocational education bill because its provisions were thought too sweeping, and the rural supervision bill because the Attorney General doubted the constitutionality of certain discrimination in the matter of the counties affected. While, however, the specific bill was lost, the establishment of vocational education itself was greatly strengthened by amendments to section 1750, providing for the various courses of study permissible in the high school; section 1760, providing state aid for high schools, and section 1519, providing for the training of teachers in vocational subjects. The matter of rural supervision is again being worked out by the Commissioner of Elementary Schools and contemplates a supervision maintained by the various normal schools, in cooperation with the County Superintendent, and in response to the invitation of the district.

Besides its definite legislative program, this board was frequently asked for its endorsement of other contemplated education legislation. In these instances the measures were carefully considered, and the commissioners were instructed to lend such assistance as they might to all bills not actually disapproved by the state board.

Among the more important measures passed by the legislature, but not initiated by this board, were Senate Bill 689, appropriating $15 per annum per pupil for the support of the elementary schools, thus replacing 70 per cent of the amount lost to the schools through the

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repeal of the poll tax; Senate Bill 447, empowering the State Board of Education to standardize courses of study for the normal schools and the qualifications for admission thereto and of graduation therefrom, thus making possible a closer relation between the elementary school and its chief source of teacher supply; and Senate Bill 439, legalizing the intermediate school.

We should be glad to be able to state the exact proportion of education bills enacted into laws by the legislature of 1915. The progress of legislation, however, is so marked by amendment, frequently even by absorption of the specific features into entirely different bills, that the only statement possible is that about 23 per cent of the education bills introduced were passed by the legislature, received the Governor's signature and have emerged as laws.

Of the legislature of 1915, it may be said that whatever personal or sectional interests may have dominated upon other matters, the general attitude toward education legislation was one of conscientious deliberation and due regard for tried standards of education and general progress. The sentiment at all times seemed to be that of desiring the fullest information in order that only the most beneficial legislation might be enacted.

Concerning the legislation now under consideration by this board for enactment by the legislature of 1917, the same policy of conservatism previously observed will be favored.

CODIFICATION OF THE SCHOOL LAW.

A most important piece of legislation contemplated is the codification of the school law. This matter has been under consideration by this board since 1913. It was brought to the attention of the legislature of 1915 and provision for preparing the work under the direction of the State Board of Education was made in the budget of the Legislative Counsel Bureau. The codification proposed does not contemplate revision or amendment except as regards clerical errors, rearrangement and resectionizing. It aims to rearrange and resectionize the laws to effect a better coordination of subject matter, and to subdivide statutes whose extreme length make necessary amendment difficult. Also, it aims to sectionize special acts which should properly be incorporated in the school law. This work has been urged by the school people of the state for many years, and their hearty cooperation is with us in this effort.

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CERTIFICATION OF TEACHERS.

We recommend legislation which will permit the state normal schools to train and certificate teachers for the ninth grade.

We recommend that the law governing special certification be amended to include teachers of the deaf and of subnormal children.

We favor legislation making an elementary certificate granted upon examination valid only in the county granting it. The various standards now possible in the several counties make this provision advisable.

RURAL SCHOOLS.

We heartily endorse the modern movement for the unionizing of small school districts, but we find that certain districts of the state are not able to combine in union districts because of the limitation of 15 cents per pupil as cost of transportation. We, therefore, recommend that this limitation be removed and the amount used for this purpose be left to the discretion of the district.

Because of the small attendance of some rural schools, we recommend such legislation as will prevent the lapsing of the district but will permit any number of children less than eight to temporarily attend the nearest convenient school, and that the appropriation of the school money be transferred to the school attended.

TEXTBOOKS IN STATUTORY SUBJECTS.

Realizing the difficulty experienced by teachers in adequately presenting subjects to children without the aid of suitable texts, and the inability of the districts legally to furnish such texts, we favor amending the law prescribing statutory studies for the elementary school to permit the state to furnish necessary books in all required elementary subjects.

FUNDS COLLECTED THROUGH STUDENT ACTIVITIES.

We favor provision for suitably auditing the accounts, frequently amounting to thousands of dollars, now exclusively in the hands of high school students.

THE JUNIOR COLLEGE.

Believing that the junior college, as now established in several parts of the state, is serving a useful purpose, we favor legislation which will provide for its financial support.

CONTINUATION AND EVENING CLASSES.

We favor such amendment to the laws affecting vocational education as will permit elementary and secondary schools to establish continuation classes outside regular school hours and to count attendance therein

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and receive adequate state aid therefor; we favor legislation providing for special evening classes in the normal schools of the state for the professional training of manual and vocational teachers.

RETIREMENT SALARIES.

We favor such amendment to the retirement salary law as will ensure the permanency of its general provisions.

Respectfully submitted.

AGNES RAY, Chairman.
E. P. CLARKE.
MARSHALL DEMOTTE.
CHAS. A. WHITMORE.
M. B. HARRIS.

REPORT OF THE RETIREMENT SALARY FUND COMMITTEE.

The committee on retirement salary fund presents the following report:

Nothing of special interest has happened in the administration of this fund since the last report.

The records show that 275 names have been added to this list of annuitants—men, 66; women, 209.

The following statement shows the financial changes that have taken place:

Balance on hand from last report	$100,218 63	
Receipts during two years ending June 30, 1916:		
From teachers' monthly payments	432,497 93	
From 5 per cent of state inheritance tax	296,415 00	
From all other sources	24,503 25	
		$853,634 81
Disbursements during the last two years:		
For retirement salaries, full amount $500	$182,870 63	
For retirement salaries, for disability, less than $500	43,424 01	
For clerical and other expenses	10,004 92	
Investments	261,949 33	
		498,248 89
Balance on hand		$355,385 92

It will be remembered that there are no salaries paid for the administration of this fund except that paid for clerical assistance, only the necessary office expenses incurred in the administration of the fund.

There is some apprehension felt by the board that the enactment of the federal tax on inheritances may interfere with this important item

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of our receipts. Should the receipts from that or any other source be reduced, it may make it necessary to devise other sources of revenue or to amend the present law by setting forward the age when the annuitants shall begin, or increasing the monthly dues after a number of payments at the present rate, or some other device that will make it unnecessary to resort to a legislative appropriation. Whenever this emergency shall arise notice will be given to those whose interests are involved.

Respectfully submitted.

GEORGE W. STONE, Chairman.
AGNES RAY.
MARSHALL DEMOTTE.

REPORT ON RETIREMENT SALARY LAW

By the Finance Committee of the Public School Teachers' Retirement Salary Fund Board.

To the Honorable State Board of Education:

One of the most important phases of the administration of the public school teachers' retirement salary fund law is its finances. The law is now entering upon the fourth fiscal year of its operation and its funds at the present time are in a healthy condition. The funds are carried in three accounts: the teachers' permanent fund, which is the original repository of all monies received; the teachers' retirement salary fund, to which monies for the payment of salaries are transferred from the permanent fund as needed; and investments, consisting of bonds bought for the permanent fund out of surplus not needed in the immediate administration of the law. It also contains the funds for permanent endowment, transferred upon the passage of the retirement salary fund law from the teachers' annuity funds of the city and county of San Francisco and of the county of Alameda. These amounts are $45,739.28 and $13,000, respectively, and to them must be added each fiscal year $10,000, as provided by law, making an aggregate endowment at this time of $88,739.28.

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The following is a statement of cash receipts and expenditures of the permanent fund since its creation to the end of the last fiscal period, June 30, 1916:

PUBLIC SCHOOL TEACHERS' PERMANENT FUND.

Statement of Cash Receipts and Disbursements from August 19, 1913, to June 30, 1916.

	Total	Sixty-fifth fiscal year	Sixty-sixth fiscal year	Sixty-seventh fiscal year
Receipts.				
Teachers' contributions under old law used to pay pensions	$142,323 65	$142,323 65		
Annuities, San Francisco County	45,739 28		$45,739 28	
Annuities, Alameda County	13,000 00	13,000 00		
Total teachers' contributions under old law	$201,062 93	$155,323 65	$45,739 28	
Teachers' contributions under new law	415,454 60	28,695 95	212,960 00	$173,798 65
Grand total of teachers' contributions	$616,517 53	$184,019 60	$258,699 28	$173,798 65
General fund (5 per cent of inheritance tax)	465,533 39	*169,118 39	139,154 47	157,260 53
Matured bonds	7,000 00			7,000 00
Interest and discount on investments	20,128 25	2,625 00	8,812 50	8,690 75
Total receipts	$1,109,179 17	$355,762 99	$406,666 25	$346,749 93
Less transfers and disbursements below	762,566 95	255,612 70	167,940 85	339,013 40
Balances	$346,612 22	$100,150 29	$238,725 40	$7,736 53
Disbursements.				
Transfer to retirement salary fund, being pensions paid under old law	$142,323 65	$142,323 65		
Transfer to retirement salary under new law	271,044 69	36,044 69	$95,000 00	$140,000 00
Total transfer to retirement salary fund	$413,368 34	$178,368 34	$95,000 00	$140,000 00
Purchase of bonds	292,949 33	75,000 00	25,000 00	192,949 33
Annuity, San Francisco bonds	44,000 00		44,000 00	
General expenses, salaries, etc.	12,249 28	2,244 36	3,940 85	6,064 07
Total disbursements	$762,566 95	$255,612 70	$167,940 85	$339,013 40

*Item contains inheritance tax for sixty-fourth fiscal year, $79,343.75, and for sixty-fifth fiscal year, $89,774.64.

The following is a statement of transactions in bonds up to June 30, 1916:

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Transactions in Bonds Purchased by the State Board of Education and Held by the State Treasurer for the Benefit of the School Teachers' Permanent Fund, and Collections of Interest Thereon for the Sixty-seventh Fiscal Year.

Title and classification of bonds	No. of bonds	Par value of each	On hand July 1, 1915		Purchased		Redeemed		Balance on hand June 30, 1916		Interest collected		
			No. of bonds	Total value	No. of bonds	Total value	No. of bonds	Total value	No. of bonds	Total value	Gross	Expense	Paid into school teachers' permanent fund
Corona City, Municipal Improvement	5	$1,000 00	------	----------	4	$4,000 00	------	----------	4	$4,000 00	$110 00	------	$110 00
Coronado, Municipal Improvement	5	1,000 00	------	----------	30	30,000 00	2	2,000 00	28	28,000 00	750 00	------	750 00
Farmdale School District	5	1,000 00	------	----------	10	10,000 00	------	----------	10	10,000 00	----------	------	----------
Fontana Heights School District	5	1,000 00	------	----------	18	18,000 00	------	----------	18	18,000 00	450 00	------	450 00
Keen Camp School District	6	500 00	------	----------	5	2,500 00	------	----------	5	2,500 00	75 00	------	75 00
L. A. City High School District	3½	1,000 00	------	----------	10	10,000 00	------	----------	10	10,000 00	187 50	------	187 50
Modesto Irrigation District	6	500 00	50	25,000 00	------	----------	------	----------	50	25,000 00	1,500 00	------	1,500 00
Nordhoff Union High School District	5	500 00	------	----------	2	1,000 00	2	1,000 00	------	----------	25 00	$0.50	24 50
Ontario City, Municipal Improvement	5	550 00	------	----------	8	4,400 00	1	550 00	7	3,850 00	110 00	------	110 00
Richmond School District	4½	1,000 00	------	----------	11	11,000 00	------	----------	11	11,000 00	247 50	------	247 50
Roseville City, Municipal Improvement	5	1,000 00	------	----------	4	4,000 00	------	----------	4	4,000 00	100 00	------	100 00
Sacramento City, Municipal Imp	4½	100 00	------	----------	40	4,000 00	------	----------	40	4,000 00	90 00	------	90 00
San Diego City, Fire Department	4½	500 00	------	----------	58	29,000 00	------	----------	58	29,000 00	652 50	------	652 50
San Francisco, Fire Protection	5	1,000 00	44	44,000 00	------	----------	------	----------	44	44,000 00	2,200 00	------	2,200 00
Sawtelle City, Municipal Improvement	5½	1,000 00	------	----------	19	19,000 00	1	1,000 00	18	18,000 00	522 50	------	522 50
Sebastopol, Municipal Improvement	4½	750 00	------	----------	2	1,500 00	------	----------	2	1,500 00	33 75	------	33 75
State of California Highways	4	1,000 00	75	75,000 00	------	----------	------	----------	75	75,000 00	3,000 00	------	3,000 00
State of California Highways	4	1,000 00	------	----------	35	35,000 00	------	----------	35	35,000 00	700 00	------	700 00
Suisun City, Municipal Improvement	5	500 00	------	----------	10	5,000 00	------	----------	10	5,000 00	125 00	------	125 00
Totals	------	----------	169	$144,000 00	266	$188,400 00	6	$4,550 00	429	$327,850 00	$10,853 75	$0.50	$10,853 25

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The following is a statement of the total cash and bonds standing to the credit of all funds:

Cash on Hand and in Bonds as of June 30, 1916.

Balance in permanent fund	$346,612 22
Investments in bonds as of June 30, 1916	327,850 00
Balance in retirement salary fund	8,773 70
Balance	$683,235 92

The following is a statement of cash transferred to, and expended from, the retirement salary fund up to June 30, 1916:

PUBLIC SCHOOL TEACHERS' RETIREMENT SALARY FUND.

Statement of Cash Receipts and Disbursements from August 10, 1913, to June 30, 1916.

	Total	Sixty-fifth fiscal year	Sixty-sixth fiscal year	Sixty-seventh fiscal year
Receipts.				
Transfers from teachers' permanent fund under old law	$142,323 65	$142,323 65		
Transfers from teachers' permanent fund under new law	271,044 69	36,044 69	$95,000 00	$140,000 00
Total transfers from teachers' permanent fund	$413,368 34	$178,368 34	$95,000 00	$140,000 00
Less disbursements as below	404,594 64	178,300 00	85,991 05	140,303 59
Balances	$8,773 70	$68 34	$9,008 95	$303 59
Disbursements.				
Teachers' pensions paid under old law	$142,323 65	$142,323 65		
Teachers' pensions paid under new law	262,270 99	35,976 35	$85,991 05	$140,303 59
Total teachers' pensions	$404,594 64	$178,300 00	$85,991 05	$140,303 59

The three fiscal years which have elapsed since this board commenced the administration of this law is too short time on which to base any absolute deductions as to future prospects, but the necessary factors of safety can be determined from a general statement of conditions and a comparison of present income and demands.

SOURCES OF REVENUE AND INHERITANCE TAX.

The retirement salary law has five means of support provided by law, namely: payments by teachers of $1.00 per month for thirty years; interest from investments; 5 per cent annually of the state inheritance tax; gifts, bequests and donations; direct appropriations by the legislature. With the exception of the sums transferred for permanent

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endowment by the associations of San Francisco and Alameda, as noted above, the retirement salary fund has been financed alone by teachers' payments, as detailed elsewhere in this report, 5 per cent of the inheritance tax, and a small return in bond interest.

The receipts from the inheritance tax are as follows:

Inheritance Tax Receipts.

Sixty-fourth fiscal year	$79,343 75
Sixty-fifth fiscal year	89,774 64
Sixty-sixth fiscal year	139,154 47
Sixty-seventh fiscal year	157,260 53

The inheritance tax is a fluctuating amount, depending upon the number of estates liable to the tax probated during any one fiscal year. It has been an unusually prolific source of revenue during the past two fiscal years, but may suffer a decline at any time. It is as uncertain as life. The last congress placed a federal tax on inheritances, which may seriously affect state income from this source. The combination of state and federal tax may place such an onerous burden upon inheritances that public opinion will demand a reduction, in which case the state will be obliged to make the sacrifice, as it alone is responsive to the wishes of the people of California. Should this situation arise, the percentage now received by the retirement salary fund from the inheritance tax must be increased, or a regular income provided from another source. The retirement salary fund can not suffer the slightest reduction in revenues, but should, on the contrary, be considerably augmented if we desire to place the future administration of the law upon a secure financial foundation.

TEACHERS' PAYMENTS AND RETIREMENTS.

The law provides that teachers may retire upon a showing of 30 years' service, half of which, including the final ten-year period, must have been in California. Teachers may retire for disability upon a showing thereof, any time after proving fifteen years of teaching in California, with the same proviso as to service in the state for the last ten years. A teacher retiring for full period must have paid in $1.00 per month for 30 years, or $360, and will receive a salary of $500 per year for the remainder of her life. A teacher retiring on disability must have paid in $1.00 per month for the period of service, and will receive a salary which shall be the same fraction of $500 as her time of service is to 30 years.

Since the passage of the law, the board has considered 605 applications for retirement. Of these, 493 were granted—363 for the full

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period and 130 for disability. Salaries granted for fiscal years are as follows:

Table of Salaries Granted by Fiscal Years.

Taken over from San Francisco and Alameda associations		82
Granted sixty-fifth fiscal year		130
Granted sixty-sixth fiscal year		142
Granted sixty-seventh fiscal year		139
Total		493
Died since December 19, 1913	28	
Disability cases resumed teaching	7	
		35
Net total on roll June 30, 1916		458

The gradual increase in the quarterly disbursements in payment of retirement salaries is shown in the following table:

Quarterly Disbursements for Retirement Last Two Fiscal Years.

Sixty-sixth fiscal year—		
July 1 to September 30, 1914	$17,854 62	
October 1 to December 31, 1914	21,084 32	
January 1 to March 31, 1915	22,849 30	
April 1 to June 30, 1915	24,238 81	
		$86,027 05
Sixty-seventh fiscal year—		
July 1 to September 30, 1915	$27,114 05	
October 1 to December 31, 1915	32,621 80	
January 1 to March 31, 1916	38,923 16	
April 1 to June 30, 1916	41,987 66	
		140,646 67
Total		$226,673 72

The following shows the amount of teachers' payments under the present law:

Total Payments by Teachers.

Payments, sixty-fifth fiscal year	$28,695 95
Payments, sixty-sixth fiscal year	212,960 00
Payments, sixty-seventh fiscal year	173,798 65
Total	$415,454 60

The amount for the last two fiscal years has been augmented by bulk payment by retiring teachers who came under the law at an advanced age, having made only nominal payments towards the full $360 required before a retirement salary can be granted. There are now on the rolls of the state about 12,500 teachers who come under the operation of the law, and are required to pay in $1.00 per month, but as these payments are deducted from their salaries by county treasurers, and as most salaries are paid in fewer than twelve annual payments, the average receipts from each teacher is about $10 per year. From now on the permanent fund can not anticipate an annual revenue from teachers exceeding $140,000 per year, except as the number of

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teachers employed in California increases. The present annual addition to the teaching force of the state is about 1,000, and the average annual increase in revenue from this source, therefore, will not exceed $10,000.

RETIREMENT SALARY ROLL GROWING FASTER THAN REVENUES.

On the other hand we are placing on the retirement roll over 130 teachers annually. In the last fiscal year the increased expenditure on this account over the year previous was $54,619.62. To offset this annual increase we can only anticipate an increased revenue from teachers' payments of $10,000. This conclusively disproves the impression, which somehow has gained circulation among teachers, that their contributions alone are providing enough funds to support the retirement salary demands. As a matter of fact, if the present rate of retirements persists, we will, in four years, be disbursing our entire income from all sources, and it will be necessary thereafter to draw upon our surplus. It is estimated by the State Board of Control that by the seventy-sixth fiscal year we will be facing a serious deficit, unless some changes are made in the conditions under which salaries are now granted, or revenues provided.

A study of the histories of teachers now under retirement salary shows an average age at retirement of 60 (plus) years. Mortality statistics give 12 years as the life expectancy at 60 years of age. For each teacher who takes advantage of the law at present the state assumes a liability of $500 per year for 12 years, or $6,000. Towards this sum the retiring teacher during her 30 years of service contributes $360. It is frequently asserted that this discrepancy is in a large measure made good by payments of teachers who leave the service without qualifying for the retirement salary, thereby forfeiting to the state the money they have paid in under the law. An average teacher stays in the profession about three years, and therefore during her teaching period contributes about $30 to the retirement fund. It would take contributions from 118 of these short term teachers to make up the sum necessary to pay for one teacher who remains to retire on full salary. Obviously, therefore, lapsed teachers' payments will have little effect on the larger problem of retirement salary support.

LOOKING TO THE FUTURE.

In bringing these matters to public attention it is not the object of the committee to sound any unnecessary alarm, but only to make clear the fact that sooner or later steps will have to be taken looking to a more sound financial basis for the public school teachers' retirement salary fund law than exists at present. The law is in the same

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category with an ore pocket in a gold mine; it is rich enough on the surface, but is certain to run out in the future. It is only proper that we should begin to take some stock for the morrow.

VALUE OF THE LAW.

Recognizing the great benefit to California schools and school teachers of the operation of the public school teachers' retirement salary fund law, the necessity for an absolutely sound financial basis becomes a matter of vital consideration in the administration of the law. If this splendid progressive educational institution is to be perpetuated, it must be safeguarded while its administration rests in the hands of those committed to and heartily in sympathy with the principles upon which the law is based. It is not safe to let the future financial obligations of the law depend either in whole or in part upon the generosity of biennial direct legislative appropriations. Neither is it right or just to contemplate for the state a future financial burden out of proportion to the benefits anticipated from the operation of the law.

The public school teachers' retirement salary fund law is based upon the theory that the schools and children of the state will be benefited by the retirement of teachers who have passed the age of real efficiency, by providing for them a salary in return for their discontinuance of active teaching. But combined with this utilitarian aim is a deep sympathy for the men and women of California who have given the best period of their lives to the instruction of the young, and a desire to see their declining years made comfortable and carefree by a stipend sufficient to meet the common necessities of existence. Thus we find combined here in this law a mutual benefit which is an ideal combination of utility and personal reward. For the benefit to the schools, the state should be willing to provide generously a lasting financial stability—for the personal benefits to accrue to the aged teachers of the state, the teaching fraternity should be willing to contribute a just portion and to agree to such modifications and limitations as will be necessary to place the administration of the law upon a firm and lasting foundation, so that nothing will be liable to arise in future years to curtail or to jeopardize the rewards and benefits which teachers spending their life in the profession have a right to anticipate.

POSSIBLE SAFEGUARDS.

There are several things which can be done to make the law less burdensome in its financial administration without working any appreciable hardships:

1. *Fix the age limit of retirement, except under disability, at 55 or 60 years.*

This would materially decrease the average life expectancy after

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retirement, by keeping in active service up to 55 or 60 years of age those teachers who are physically and mentally able to discharge their duties without detriment to the schools. The board has many instances of the retirement on salary of well and hearty teachers of from 50 to 60 years of age who were perfectly capable of rendering many years of good service in the schools. Some have retired on $500 salary from the state and engaged in other remunerative occupations, including teaching in other states. At the same time, teachers eligible to retirement but not yet 55 or 60 years of age, who are physically or mentally unfitted to continue teaching, could retire under the disability clause, without any loss of salary. The Attorney General of the state has held that teachers who have served 30 years may retire for disability and draw the full $500 salary.

2. *Increase the years of service in California from 15 to 20 years.*

As the law is primarily for California, this provision would serve not only to reduce the number of teachers qualifying under the law as at present, but it would reduce the number of Eastern teachers who come here with 15 years' service in other states and compete for California positions with the graduates of our own educational institutions. The state normal schools are now turning out approximately 600 more California trained teachers than find places in California to practice the profession they have spent several years in mastering. There is an element of injustice in the present situation as well as an economic loss. It costs the state of California approximately $500 to graduate a teacher from one of our normal schools. It costs the teacher twice that amount to live for two years while taking her course in a normal school. In this idleness of 600 California made teachers there is a failure to utilize a product which it has cost $900,000 to produce. Furthermore, it was claimed by the original advocates of this law that the retirement salary was in the nature of a deferred payment which the state really owed the teacher, but obviously the state can owe nothing on the years of teaching in other states.

3. *Increase teachers' payments after 15 years of service from $1.00 per month to $2.00 per month.*

The equity of this suggestion should be clear. After a teacher has taught 15 years, the chances of ultimate retirement under the law and participation in its benefits are five times greater than that of a teacher who has taught only 3 years.

4. *Permit no retirement for disability under 20 or 25 years of service, 20 of which has been in California.*

The board is convinced that the disability retirement provision of the retirement law is open to abuse. At present 25 per cent of retire-

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ments are for disability. The average period of service for such cases is 25 years and the average age 60 years.

ENDOWMENT IDEAL SOLUTION.

These are suggestions which have occurred in discussing the financial aspects of the law. They were submitted to accountants of the State Board of Control, who reported that the changes would remove all danger of any immediate deficit and increase the surplus funds available for permanent investment. The law now provides for an endowment fund made up of transfers of San Francisco and Alameda annuities, amounting to $58,739.28 and $10,000 per year, to be set aside from the permanent fund. The ideal future for a law of this character is an endowment fund large enough to earn an amount, which, added to the teachers' payments, would provide annually without other revenue a fund sufficient to meet all demands upon the law. Such an ultimate end was unquestionably in the minds of the framers of this law when they provided even the modest sum of $10,000 per year for permanent endowment.

FILING OF TEACHERS' HISTORIES SHOULD BE MADE MANDATORY.

The work of your committee in arriving at an intelligent estimate of probabilities in the future administration of the law is greatly hampered by the fact that only 20 per cent of the histories of teachers who may become eligible under the retirement law are on file in this office. Continued requests fail to secure any serious effort to decrease this deficiency. Young teachers, who do not at this time expect ever to accept the benefits of the law, are careless about furnishing the department of education with this information, which, though vital for our purposes, is nothing to them at present. Your committee would like to see an amendment to the retirement law secured, making the payment of salary as teacher dependent upon furnishing this board with any vital statistical information which it may require for its records.

RECOMMENDATIONS.

The Finance Committee, therefore, recommends that the public school teachers' retirement salary fund law be amended in accordance with the suggestions contained herein, and that its percentage of the inheritance tax be kept at such a figure as will guarantee against any reduction in revenues at present enjoyed.

CHAS. A. WHITMORE, Chairman.
M. B. HARRIS.
E. P. CLARKE.

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PART III.

REPORT OF THE SECRETARY.

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LETTER OF TRANSMITTAL.

To the Governor of California
and the State Board of Education.

LADIES AND GENTLEMEN: Please find herewith the reports prescribed by law for the educational affairs entrusted to my general supervision during the past biennium. I hope the various tabulations and the accompanying descriptive text may afford a clear view of the conditions in the state department of education during that period.

I remain, very respectfully,

Your obedient servant,

EDWARD HYATT,
Superintendent of Public Instruction.

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GENERALIZATIONS

The duties of the Superintendent of Public Instruction as prescribed by law are many and varied, and they seem at times to spread him out pretty thin.

Thus, he is secretary of the State Board of Education; the executive officer of the same board; the distributor of the state textbooks; he apportions the state school funds; he is a trustee of many state institutions; he is required to print and distribute school blanks and supplies; to keep records and statistics; and to visit the schools of the state. Without numerous assistants in the different departments, the work could not be done at all. I would bear testimony to the high character and zealous cooperation of all those assistants. Many of the activities here set down could not have been accomplished without their faithful work, and to them is due appreciation and gratitude.

As secretary, I would report that the board has held thirteen meetings during the biennium; ten at Sacramento, one at Santa Barbara, one at San Francisco, one at Los Angeles. Almost without exception these have been six-day meetings, beginning on Monday and closing on Saturday. The average cost of a meeting is about $1,300, made up as follows:

Per diem of seven members at $15 per day	$600
Traveling expenses of members	300
Salaries of commissioners and secretary	400
	$1,300

The total expenditures of the board during the past two years are shown in the tabular statement herewith; the first two items are met by fees from the applicants.

	Sixty-sixth fiscal year	Sixty-seventh fiscal year
Cost of life diplomas	$856 49	$941 60
Cost of high school credentials	209 25	163 50
Per diem, members of state board	3,345 00	3,900 00
Traveling expenses, members of board	2,125 44	2,316 35
Traveling expenses, commissioners	1,709 61	2,222 50
Salary of commissioners	12,000 00	12,000 00
Salaries, clerical assistants	2,707 42	5,694 81
From textbook appropriations for salaries	3,136 00	931 00
Postage	1,170 00	1,250 60
Express	47 12	45 12
Publicity	--------	85 67
Freight	--------	16 11
Rent of Los Angeles office	--------	64 12
Stationery, from purchasing agent	--------	151 70
Printing	1,383 71	1,579 78
Telegraph	89 07	111 73
Telephone	112 12	245 90
Office fittings	1,212 78	562 73
Miscellaneous	232 36	295 72
	$30,336 28	$32,578 94

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The State Board of Education also acts in an ex officio capacity as the Retirement Salary Fund Board, to administer the great fund provided by law for the retirement of aged and infirm teachers. For this reason, clerk hire, office supplies and postage are the only expenses paid by the retirement salary fund in addition to the annuities for the retired teachers. A detailed financial statement of this fund, showing all receipts and expenditures, will be found in the report of the Retirement Salary Committee on a preceding page.

The work as executive officer requires a good deal of time spent in the office superintending the great stream of correspondence, callers, questions, rulings and complaints that continually flows through the headquarters of the state school system. This phase of activity perhaps can be illustrated by the following account of a sample day in the office:

Arrive at 9 a.m. Find office force at work roughly distributing the morning mail, which consists of 200 letters and 25 or 30 circulars, reports, papers, and other enclosures. Our mail is regularly one of the largest and most varied of all the departments. It comes twice a day. It is distributed to the three commissioners, the chief clerk, the bookkeeper, the statistician and the superintendent. Everything that is in doubt comes to my desk, and by the time I glance around in the other offices it is ready for me.

The correspondence runs somewhat like this:

Letter No. 1. Personal request to intervene with Dr. Snyder in the matter of a very deserving application for a special certificate in music. I intervene. The result is the same as if I hadn't.

Letter No. 2. Trustees ask how to get rid of a teacher who is cross or careless or crazy or lazy. Opinion given that they would probably better get along till the end of the contract, unless she is actually so insane or immoral or criminal that a court would uphold her discharge.

Letter No. 3. Teacher asks how to work Problem 24 in the Advanced Arithmetic. After trying it awhile, it is respectfully referred to the Textbook Department.

Letter No. 4. Young Mr. Squiggs, of the University, is preparing a thesis upon the weak points of our public schools and would be very much pleased if I would give him the figures bearing upon it for the past ten years, together with my own reactions upon the following fifty questions. Put aside for future consideration.

At this point a stenographer appears with 75 applications for special credentials needing signature.

Letter No. 5. Ten pages, upbraiding and reproaching me for narrow and ignorant views upon somebody's fad. Answered in a mild and pacific vein.

Letter No. 6. From a normal president enclosing 115 diplomas, imploring me to sign them instantly, hurry over to the Governor with them, and return them in time for the exercises next Friday. I start them on their way. The Governor is in San Francisco, exact location unknown.

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At this point Commissioner Wood appears with two book contracts that he has prepared with painstaking care, for me to read and criticize. Put aside for a more convenient moment.

Letter No. 7. Eastern publisher, complaining that a certain enclosure that he sent in with his sealed bid for textbooks was not returned. Referred to the Commissioner of Elementary Schools.

Delegation from rural school appears at this point complaining that trustees refuse them the schoolhouse for a series of night meetings. Render opinion that the trustees are responsible for the building and that so long as they remain trustees their judgment and discretion must govern. Job Wood and Will Wood called in to participate in the heated discussion.

Letter No. 8. Old teacher whose experience is insufficient for a pension writes, bitterly upbraiding us for paying no attention to her letters or answering them bruskly. Chief clerk called in to explain, finds copies of seven answers we have sent in a year, all reasonably polite; mild and pacific answer dictated.

At this point a gentlemanly agent comes in, "introducing" a new encyclopedia, wanting to sell me a copy or failing in that to get an endorsement that he can use in the schools. He gets neither, but he is wound up and it is impossible to stop his mechanism short of ten minutes. He is followed by another very suave gentleman who wishes to insure my life, and by a collector for the Salvation Army, and by three ladies who are soliciting for a church fair, and by a representative of the ministerial union, and by three reporters anxious for a story, and by a hobo who wants ten cents. Somewhat shattered in nerve I return to—

Letter No. 9. From a poor lady down in San Felipe who says flat out that she is on duty at the convention of the Mothers' Clubs for a talk on education and she doesn't know what *to* say, but she *does* want to make a good impression. If I'd just help her she is sure she would excite applause. I fish in my bar'l and send her one of my old institute lectures.

The elementary commissioner comes in here to give a breezy sketch of her recent travels, and the statistician brings in a few pages of figures needing sympathetic attention. An eastern teacher follows who just thought he'd drop in and see how things are in this state, anyhow. Mr. Snyder brings in 96 special credentials for signature.

Letter No. 10. Is from an unfortunate teacher in a big city who can not get or hold a school. She has been in the state half a dozen years, has been employed two or three times and now is in despair. *What* shall she do? She is fitted for teaching and nothing *else*. She *must* have a school. She must have *bread*. What shall she *do*? It impresses me as a cry of extremity, from one not fitted to live in her environment. What can *I* do? Only write some feeble good wishes, some hopes for better fortune!

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Letter No. 11. Asks if Friday preceding may be taken as a holiday when Christmas comes on Saturday. Answer, "No." Also asks how we are to tell which are school holidays anyhow. Answered "Follow section 10 exactly," where they are categorically set down.

Letter No. 12. Superintendent Mark Keppel asks for a copy of all recent opinions of the Attorney General on educational questions and expresses his distaste at one in particular. I hunt the opinions, arrange for copies, and send a pacific letter of transmittal.

At this point, good comfortable Superintendent Smithers comes in from San Juan County. He has saved up all his troubles for months, and now he has leisure to talk them all over at the state office, when there is plenty of time to explain things himself and get them all straightened out. We straighten them out—and *tempus fugit!* In the meantime a clerk of the Board of Control calls up for a long dispute over a furniture bill, and there are three checks to sign for temporary stenographers for the board, and Sherwood brings in half a dozen claims for freight on free textbooks needing validation. Colonel Somebody calls to insist that the schools of the state shall take advantage of the law for cadet drill, and the president of a peace society threatens me with extermination if the public schools train the boy to be a soldier.

Letter No. 13. Teacher in a distant school complains that the superintendent objects to paying her warrants for two weeks rather than a full month. Explain that the school is conducted upon a basis of *months* and the superintendent is justified in insisting upon the month as the unit. The pension deductions are made by months, the attendance is computed by months, the salary paid by months, and for a few trustees to pay otherwise leads to mistakes and confusion.

Letter No. 14. Lady from San Francisco asks whether a married woman can be admitted to a public school, to learn sewing and cooking. Answer: certainly the school board can treat married women the same as they do any one else. It seems to me the school would be doing the greatest possible good in the world to teach a married woman to cook and sew.

Here comes in the flag lady to urge that we organize at once a campaign to put a flag in every schoolhouse; and a committee from a society upon the Stanislaus to promote humane education in the schools; and some people who want to know the extent to which the antifraternity law is enforced; and a delegation to call my attention to the necessity for the metric system or simplified spelling in the schools of the state; and a number of ladies urging medical inspection for the public schools; and a representative of the Thrift Organization urging that his work be taken up; and some good citizens pleading for clean-up day, or ripe-olive day, or water-conservation day, or bird day, or mothers' day, or honest-measure day, or country-school day, or old-home day, until I wonder if any day is left for an ordinary school day.

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After listening to all these with keen attention and with every mark of interest and enthusiasm I return to the letters.

Letter No. 15. Can a trustee hold office who can neither read nor write the English language? Yes, there is nothing in the law to prevent it. The only qualification is that he shall be a citizen of the district and shall get a majority of the votes. Such is the freedom of our glorious country. The same thing is true when we select a county superintendent of schools or, for that matter, a *city* superintendent of schools—no certification is prescribed and it is only necessary to get the voice of the people. Strange as it may seem, the matter is never abused. The trustee may be a very valuable one who knows nothing of letters. The superintendent always is from the school teaching class. The freedom is not abused.

Letter No. 16. Some trustees have imported a teacher from Oregon. She has nothing in the way of certification for California and school is all ready to begin —in fact, it has already begun. It is absolutely necessary that the rules be suspended for this time and *their* teacher helped through. Answered that it can not be done. Much as it pains us, all must meet the same treatment.

Perhaps this is enough to illustrate the nature of the office work. While these particular points did not come in just this sequence on any one day, all these and a thousand other similar ones *did* come and *do* come continually, and they are disposed of as best we can as they come. Only sixteen letters are suggested here, and as many other points, but any one familiar with correspondence and office work knows that twice that much in a day is more likely. Of course these answers must be hasty, often mistaken or inadequate, as all human things are.

In an office that deals in a familiar way with the public it is not possible to carry all these things in exact, cast-iron business channels, cutting people off with a word and working for efficiency only. There is a kindly human element in it, a necessity for counsel and helpfulness, that must be reckoned with. These same conditions and necessities are found in the offices of the various school superintendents throughout the state.

The executive officer is charged with the general oversight of the employees of the board. These, in addition to those before noted, are as follows, at the present writing:

Clarence S. Pixley, chief clerk	$200 per month
Florence B. Argall, stenographer	100 per month
Mabel Baldwin, stenographer	85 per month
Abbie B. Telfer, stenographer	85 per month
Marion Burgess, stenographer	80 per month
Marion H. Ketcham, clerk	80 per month
Eva E. Hays, clerk	60 per month

Another duty of the executive officer is to O. K. the great multitude of claims coming in for the expenditure of money—postage, telegraph, rent, electricity, telephones, express, freight, supplies, furniture, drayage, salaries, railroad fares, hotel bills, labor, typewriters, and a great variety of smaller details. The labor of handling all this under the

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complex system in vogue is becoming so great that it demands the entire time of one man. So far it has been done by the assistance of my own stenographer, but the burden of estimates, vouchers, approvals, bids, records and accounts has been so constantly growing, that he can not now do much else.

Another important activity placed upon me by the law is the distribution of state textbooks. This work is in exceedingly satisfactory condition, largely because of the enthusiastic and energetic efforts of Sherwood Dyas, the bookkeeper in charge, together with those of State Printer Telfer in keeping up the supply. School people quite generally testify that their books arrive promptly and in sufficient quantity, and that the enterprise is a very great boon to the children and the teachers of the state. Particularly are they happy over the disappearance of the old troubles and delays of getting their classes completely furnished with the textbooks at the beginning of the term. It is pleasant to record the fact that the books are costing the state much less than expected. When the law was passed, half a million dollars was estimated as necessary to inaugurate the system, $200,000 per year afterward. The actual necessities turned out to be only half those sums. There are over 400,000 children in the schools. The cost of their state texts is a little more than $100,000 *per year,* so that the average cost per child per year is about 25 cents. Thus the average cost of a child's state textbooks for a year is less than that of six cigars, less than six glasses of beer, less than six daily papers, less than six movie shows! The free distribution amounts to about half a million books per year, to somewhat less than half a million children.

The sales of books are insignificant, only $6,000 per year. They are sold at cost price to the dealers, schools and individuals, and are used to supply private schools chiefly, although a few are called for to replace books lost, damaged or destroyed by pupils of the public schools; and a few so that pupils may have an extra set of books at home.

The books are printed by the state printer, for the most part from plates leased of the publishing companies on royalties ranging from 12 to 15 per cent of the list prices. This royalty is paid quarterly and it amounts to more than one-fourth the entire cost of manufacture. During the year just passed the American Book Company received the greatest royalty, $10,000, on histories, arithmetics, writing books and readers. Macmillan & Co. came second, with $7,000, for geographies and spellers. Silver, Burdett & Co. were third, with $5,000, for language books and readers. D. C. Heath & Co. came next, with $3,000, for civics and introductory history. Newson & Co. received $850 for their primer, the World Book Co. $750 for their book on hygiene,

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and Ginn & Co. were paid a small balance due on their old reader contracts.

All these facts and many others concerning the textbook situation may be more exactly obtained from the statistical tables in section 10 of this report, on a later page.

Visiting the schools of the state is a very elastic term, which may mean anything. Manifestly it is impossible to visit *all* the schools of the state. Only types, or those needing special help or those of special interest can be undertaken. The addition of three commissioners to our office force has greatly widened the scope of this activity, and has improved the service. These three, each with special interests in a different field, have been active, enthusiastic and zealous in going out among the schools of the state, with excellent results in harmonizing, inspiring, regulating the work. Their reports will show this more in detail.

I have myself gone to as many of the regular public schools as time would allow; and in addition have made it a point to visit a number of the unusual institutions that form a part of our educational resources. The following sketch of a group of these schools may perhaps be a proper part of this report. While it gives a very fragmentary, incomplete view, it may be of interest in years to come to preserve this free and easy account of these schools in the year of our Lord 1916.

PRISON SCHOOL AT SAN QUENTIN.

The forbidding gray walls of San Quentin, rising from the tidal marshes of Marin County, might not be expected to harbor anything of educational interest. Yet here I found the most original and forward looking, most encouraging reformatory education of all.

Warden Johnston is the impelling power in it all. He is a man of vision, of dreams, of executive ability, and driving power besides. Strange that the frail, slender, white faced manager of a "gents furnishing store" in a great city should have developed into the chief penologist of a great state at the call of opportunity! There is some difference between offering purple neckties to gilded youths over the counter and bossing two thousand desperate criminals of every clime and color and in being responsible for them day and night. Johnston's career illustrates the saying that in America there is always the right man ready to spring up for any emergency.

When the gloomy walls opened and let me in, the captain of the guard conducted me to one of the buildings of the great quadrangle that he called the chapel. Inside was a huge, bare room. One end was filled with the stacks of a large library of well-worn books. The floor was covered with long desks. Blackboards and charts hung from the

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pillars. An occasional table stood in the corner or among the desks. Six convict teachers were at work, with Mr. Purdue, a convict principal, in charge. Over him in general charge of the educational activity, is the chaplain of the prison, who was not there that day. There are, therefore, no outside, professional teachers on the work at all.

This large room has all eight grades running simultaneously. It is for the younger prisoners, those under twenty-four years of age. The largest class was the first grade. About 160 men are in this school.

In another of the big buildings was a night school, where the older men who choose may get the elementary things of education after their day's work, as the younger ones do in the day school, after a shorter day's work. Some 80 prisoners attend the night school.

Now comes the big thing, the thing that is new, the thing that Warden Johnston really regards as his significant and original undertaking. He calls it the Letter Box System. The day school teachers prepare lessons in leaflet form, in all the branches of the upper grammar and lower high school grades. These are turned out in quantity, beautifully printed, by the prison printing press. All prisoners who will are given these lessons regularly and encouraged to work them out *in their cells,* after the day's work is done. Twice a week teachers take up the papers from the letter boxes, grade them and give necessary explanation and encouragement; 850 men are enrolled in this work. Of course no one can take it unless he is at least past the fourth grade—but the day and evening schools carry them up to that point. In fact these may be considered as feeders for the big Letter Box School.

For those who are farther along there is an organization of the university correspondence school. The librarian gets the desired lessons from Berkeley, issues them to the men who call for them, takes up the answers and papers as prepared by the men in their cells, delivers the gradings and suggestions with the corrected papers and keeps a card index record of the whole proceeding. I looked this over with much interest. The variety and extent of it was remarkable. A very great many of the prisoners had taken courses in the Spanish language—not the Spanish or Mexican prisoners at all, but the Americans of the higher class, who had taken it up to add to their general equipment, believing it was important to the future. I was surprised to see that a large number had taken a course in *flower culture.* Other courses were as wide as the world—salesmanship, banking, gardening, dietetics, mathematics, bookkeeping, zoology, engineering and what not. No less than 250 prisoners were taking work in this university school, sending in their papers and receiving back the corrections and the suggestions of the university professors, those who have the various subjects in charge.

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Thus, more than half of the entire prison population—there were 2,433 at roll call, all told, the morning I was there—are touched more or less by this educational enterprise. It is a great boon for these men to have something to occupy their minds during the solitary hours when they are locked in their cells. It gives them hope—it prepares them better for returning to society—it prevents the ferments and plots and revenges that would otherwise occupy their thoughts. Certainly the half of the convicts who take this mental work will need less of armed guards walking their beats, and certainly fewer of them will return to prison again—20 per cent of the whole population, remember, are *repeaters.*

The experiment is so new, however, that the warden refuses to draw any deductions or prepare any statistics touching these points. "Time for that later," he says.

In the meantime, many criminologists are coming from other states to study and often to adopt these plans. Oregon, Washington and Arizona are among the number. The striking points are as follows:

1. The whole prison population is given educational *opportunity.* It would be quite impossible to get such large numbers of such men into a *school,* impossible physically and financially, too. In this case, the school is carried into the solitary cell, where it is most needed, and carried there by wholesale.

2. The men must take their education in addition to their labor. They can not pretend to go to school to get out of work. No fraud about it if they take it of their own desire, after doing their penance in the jute mill or the factory for the day.

3. All classes of men—and women—there are thirty-five women on the rolls—are provided for—illiterates, elementary grades, high school and university—quite a completely organized system, one part leading naturally to another.

Thus, you have a hasty view of an educational effort that is making this very day in a California institution that is old enough to have gray hairs—in 1851 it was in existence, and had 35 prisoners. The effort is worth our intelligent attention, and it certainly deserves our encouragement so far as we are able to give it in the future.

THE PRESTON SCHOOL OF INDUSTRY.

Another of the educational resources of the state is the reform school at Ione, known as the Preston School of Industry. Here are assembled some 400 boys, all over 16 years of age, who have been committed there by the courts to stay until they are twenty-one. They are organized into twelve companies and are under military discipline. They are housed for the most part in cottages, about 30 individuals in each, with

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a house mother in charge. Some companies are in the basements and upper floors of the large administration buildings. One is in a cell house, living and breathing and having its being under lock and key. This company is largely composed of the runaway boys.

There is a school with five teachers, conducted by the institution, which serves about half of the boys. The other half have already gone beyond the grammar grade or else are judged not mentally able to profit by intellectual training.

This whole enterprise is more nearly conducted under the Binet-Simon mentality tests than any other I know. All the boys admitted are tested and recorded and tested again from time to time. The mental ability of each boy as thus determined is used in assigning him to his company, in placing him in his work, in deciding whether he shall go to school or not, and in steering him toward a future occupation.

The psychologist who conducts this part of the enterprise is Ralph S. Roberts, a young university man, with courage, cheer and enthusiasm. I watched him testing Elmer, a negro boy. 'Tis a long hard grind to put a subject through these mental tests. Maybe it lasts half a day, and leaves both tester and testee exhausted. For the most part it consists of a great number of questions along the different lines of mental activity—some requiring memory, some observation, some quickness, some judgment, some color sense, some form sense, some weight sense, some number sense, and so on and so on *ad infinitum*. I listened to it for an hour and a half and saw the record made, and was glad 'twas the colored brother who had to answer instead of myself. Really, it seemed to me I should be rated as a defective myself without doubt. Mr. Roberts, however, assured me I would stack up higher than that, which was a great comfort.

Here then we have a most interesting educational experiment in full swing. Four hundred young citizens whom our regular public schools have failed to reach for one reason or another, are here brought together and given the best chance for success that we know how to give, up to date. Nearly half of them are feeble-minded. One-fifth of them are of normal intelligence. The remainder are of backward intelligence or are mentally defective. Eighty per cent of them come from broken homes—homes that are broken up by death, desertion or divorce. The result of a remarriage of one of the parents is very unfavorable to the boy. Home conditions among the feeble-minded is worse than among the other mental groups. The largest number drop out of the public school before the age of 16 and before completing the sixth grade. Hardly any were in a public school at the time of commitment, but practically all had been in the public school previously. Among the normal group are those of very high intelligence, high school grad-

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uates and college students. Seven married men are there, some with children of their own. A boy's age is judicially determined at the time of commitment; thus it happens that a boy sometimes comes "aged 18" who had been previously discharged from the same institution at the age of 21. A few of the boys are of great wealth—hundreds of thousands of dollars. Practically all of them are confirmed cigarette smokers at entrance.

The great body of the boys are organized into a republic, with all of the courts, law making bodies, executive officers, etc., complete. About 10 per cent, however, are not mentally competent to take part in student self-government, and they remain under the direct control of adult officers of the state.

Three of the companies live in Honor Cottages. Here they have almost as much liberty as they would at home. They go to bed, eat, read, play about their cottages in freedom. Their living rooms have big fireplaces and equipments of sports and games and music. No penal suggestions are visible at all. Of course, they must go to school half a day and labor half a day, each day. If they can't live successfully here, they go down the social scale to a more restricted domicile.

There seems to be plenty of labor to occupy the whole community for the future. There are blacksmith, carpenter and paint shops, shoe shop, tailor shop, printing shop, bakery, laundry. In agriculture, there are orchards, poultry, dairy, live stock, gardens and farms. The soil, however, is not well adapted to agriculture, being hard, thin, white and poverty stricken, very suitable as a clay for making brick. Consequently, the chief industry is brick making, which is carried on in a successful and scientific way. Many brick buildings are erected by the boys, and they can be seen here and there on the hills and slopes. The grading of the grounds, building of streets, laying of sidewalks, planting out shrubs and trees, putting up fences, excavating, laying out athletic fields and all that constitutes an extensive and steady employment for many hands. The total cost is $275,000 for two years. The scenic effect of the whole estate is very handsome and striking, a great area of valleys and rolling, brush covered hills, with the Sierras in the background, and with the varied activities, the tall Administration Building, the many smaller structures of the Preston School of Industry in the front.

Here the courts send the young men of the state whom the homes and the schools have failed to hold and control. Here they are ministered to, as best we know, physically, mentally and morally. They are tested and studied, and are put into occupations and activities for which they seem best suited by taste and mental peculiarities.

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Then they have opportunity to go up—or down; up toward the freedom and self-control of the Honor Cottages or down toward the solitary cell of the Detention Building. In the struggles of this life toward self-direction lies their opportunity and our hope.

I can not undertake to set down here the many details of that life, the records, the credits, the rewards, the officers concerned in it, the particulars of the complex system for carrying it out; but can only suggest it as a most interesting educational enterprise, well worth further study and observation from any one interested in the future welfare of the state.

THE GEORGE JUNIOR REPUBLIC.

For a long time I've been hearing about the George Junior Republic of California, located near Chino, in San Bernardino County. At last, one Saturday afternoon, I journeyed out from Los Angeles to see it.

It is an entirely worthy and an important part of our state educational system. It is not a public school, nor does it compete against the public school in any way. Rather, it supplements the public school, taking up and working with the misfits and spoiled lumber upon which the public school failed and cast aside as waste.

The institution owns 275 acres of rich level land in one of the fairest southern valleys that the sun shines on. It is underlain by artesian water, and has a nice surface stream with natural groves of willows. April poppies were in bloom when I was there, and the surrounding hills were smooth and green and wonderful to see. The land is from the heart of the Chino Rancho of 42,000 acres, an old Spanish grant that was bought by Dick Gird when he sold his gold mines long ago. Now it is cut up and populated, with the town of Chino for its metropolis.

The Republic was founded by a group of good but wealthy citizens of Pasadena, upon the idea of the republic of similar name at Freeville, New York. It departed immediately, however, from the parent institution and is like it only in name and in basal idea at the present time. Vocational guidance is its watchword.

It is seven years old. It takes care of 75 boys. Its chief officer is L. H. Waterhouse, who is called Managing Director. He has about twenty assistants, including teachers, heads of department, bookkeepers, and what not. Among these assistants are a group of high-spirited, helpful young enthusiasts from Pomona College, near by. The boys are committed to the school from the juvenile courts of the surrounding counties and are also sent by parents who can not manage their children at home. Almost without exception they are the children of broken homes, their parents the victims of death or divorce or "incompatibility."

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The Republic has a large and handsome group of buildings growing up about and upon a swelling hill that rises proudly above the level surrounding land. There is a Government House, substantially built of concrete. It contains an auditorium with a moving picture outfit, a council chamber, court room and jail. There are three cottages, where the boys live, each under the care of a house mother. The largest of these are La Paloma and John Brewer cottages, costing $10,000 each, and built of shakes. There is a solid cement business block, containing the store, post office, bank and bookkeeping departments. A handsome chapel is building, and a nice three-roomed public school is maintained by the Chino district. There is a swimming pool, a tract of "government land" that any one may "take up," a dairy, poultry yards and farm buildings.

The boys must pay $4 per week for their board, room and laundry. They must also pay for their clothes and any other necessity or luxury that they choose. They must work to earn the money upon which they live. The poorer jobs pay nine cents per hour, the best 12 cents. They receive pay for going to school as well as for the laborious jobs, and they must go to school half the day. They get extra pay for overtime. Some boys accumulate money, some spend everything as fast as it comes, some go in debt. They have an election every six months, choosing their own judge, prosecuting attorney, and councilmen. When they run away or commit any crimes they are apprehended, tried and punished, too. They are up against the real thing and there is no nonsense about it.

A great variety of work is available. There is stern competition for the desirable jobs—and the best man wins. Independent enterprises, like pigeon raising, or gardening, may be undertaken. Brickmaking, poultry, dairy, farm, cook shop, printing office, housework, laundry, afford abundant opportunities.

The head poultryman was Lawrence Porteous, a boy about 18 years old. I talked with him a long time in his yards. He was apparently an expert poulterer, and knew all about the business. He hired several assistants to feed the chickens and do the chamber work for them, while he bossed the job and kept the records. His positive and assured style of talking was a wonder to hear.

"Here are a thousand chickens that will be just right for fryers in three weeks. We dress them and send them out as far as San Diego, by parcels post. No, we don't sell them to the cookhouse till they grow up.

"Here are a thousand just three days old. We feed them plenty of sour milk. They don't get sick if we give them plenty of sour milk, and we lose hardly any of them. Why, a chicken *can't* get sick if you keep him clean and feed him right.

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"Here are the brooders, where the little fellows go in to get warm. A chicken must be kept warm. If he gets chilled, he's gone. Why, I can raise anything that will hatch. See those banty chickens with the others? If I can raise banties I can raise anything. I had one mocking bird and two black birds with one brood, but the lining caught fire and they burnt to death. Duck eggs and goose eggs, they're easy. We've got some peacock eggs now to try out."

After thinking the matter over for some time I came to the conclusion that this boy had his head and his heart and his time full of something pretty practical, something he could and probably would use for a life work. The Republic has justified itself, has given its reason for being, in what it had done for Lawrence Porteous alone! But, there are 75 others! And Mr. Waterhouse told me, with tears in his voice, "And I could guarantee to fill a new cottage *every month* with fifty boys, if I could only get the money to build the cottages!"

The two Pasadena families that take the greatest interest in this enterprise are the Atwoods and the Fowlers.

Miss Atwood has built a beautiful home on the hillside and lives among the boys. Every Saturday they all come to her lovely parties in the evening to play games, sing, listen to the victrola and have a jolly time. Sunday evening they go there to Sunday-school if they feel like it, and afterward to church whether they feel like it or not. I laughed all evening at the master of ceremonies, a red-haired boy, who had a great time whooping things up and making the late arrivals take a front seat. They would all want to slump down outside, on the steps, or in a settee—but no, sir! There were seats in front and up they must go. Sometimes they would refuse, rebelliously—but a dark and significant hint at "the can" from the red-haired boy would send them up with promptitude. The "can," as I inferred, was the jail.

Miss Atwood is known as "Aunt Eleanor" and she is the tutelary genius of the place.

The Fowlers have bought a piece of land and built their home a little farther away, but where they, too, can be a part of the social life of the Republic. Their modest cottage cost $100,000, and it is an architectural gem. Near it and connected with it by pergolas, is the guest house, where a dozen visitors may be entertained. The family came originally from Detroit, and built its fortune upon the white pine lumber of Michigan. When the pine was all stripped off, the head of the house came to California and engaged in the same business here, building the flume that brings lumber from the mountains down to Sanger, in Fresno County. The city of Fowler was named for him.

I was interested in studying Mr. Waterhouse and tried to find out where he got his steam for this kind of work and where he got his ideas concerning vocational education. He looks like a sincere, honest

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and intelligent young farmer, and so far as I discovered, that is what he is. He is not a college man, but has read much and has thought about his reading. He is certainly conducting the most interesting and most practical example of a prevocational school there is in the state. He is working with his two young college men, Mr. Clary and Mr. Snyder, in a deliberate and conscious way, to develop the principles of vocational guidance. His laboratory is worth watching and worth visiting by those who are interested in educational progress.

THE SCHOOL AT FOLSOM PRISON.

Last week I went with Mr. Jacobs to spend a day in a new kind of a school, the Prison School at the Folsom penitentiary, commanded always by the rifles and machine guns of a dozen guards in watch towers and walls all round. Jacobs is the principal. But he only goes there once a week, on Saturdays. The rest of the time he is head of the department of mathematics in the Berkeley High Schools. Friday nights he goes to bed on the newspaper train which pulls out at three o'clock in the morning for Sacramento. He gets there just in time to catch the auto-stage for Folsom, twenty miles away. At five o'clock in the evening he reverses the route, returning to Berkeley.

There are 1,200 men in the prison, all kinds and colors and races of men, sent there for all kinds of offenses, but chiefly for crimes against property. Stealing, burglary, robbery, absconding, forgery, larceny, house breaking, embezzlement seemed to be about three-fourths of the cases. This army of men is well fed. They have splendid appetites. But they have nothing to do. Society will not allow them to produce anything to be used outside, for that competes against free labor. They do some gardening and some farming on the prison farm, but that can't keep 1,200 husky men busy! Therefore they loaf, they kill time, they lounge around, under the guns of the guards. It is a pitiful thing to see them doing nothing, growing more inefficient, learning to be listless and worthless. They will return to society less capable of maintaining themselves than when they left it. They should be employed, they should do something, they should labor even if it be only to throw a pile of bricks over the fence and then throw it back again.

With all these men Mr. Jacobs is hail fellow well met. They call him "Professor," and wherever he goes they have a cheery greeting for him.

A short while ago he had a queer adventure. While going about one night in the scholarly streets of Berkeley, he was suddenly held up by highwaymen. His captors came close, revolvers in hand, to rob the schoolmaster of his wealth. When they saw who it was holding up his hands "Why, hello, Professor," they said; and after some pleasant

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conversation, they wished him a kindly good night and passed on, never touching the thirty cents in his pockets. It was some of his friends from the prison who had been paroled or discharged!

Twenty-one years ago Jacobs landed in America from Russia, raw, green, scared, penniless and unable to speak a syllable of English!

A week ago he married a lady of Berkeley, cultured, scholarly and beautiful, with all kinds of university degrees, a native daughter and the daughter of a native daughter of California.

Truly is America the land of opportunity!

The prison school is held in the chapel, a great, bare hall, with a few tables and a great number of benches on the floor and a few blackboards on the wall. A little cage in the corner is filled with the books and supplies.

Mr. Jacobs is the principal and he is the only teacher from outside the prison. The others are chosen by him from the convicts. I never saw more bright-faced, enthusiastic teachers. They were eager, absorbed in their work. And, like other teachers everywhere, they had troubles of their own. Not all the convicts believed in schooling, and elements were always at hand to disparage, hinder, discourage and ridicule their work.

Classes were conducted in mathematics, Spanish, Italian, typewriting, stenography, English. About half the total number of prisoners were in the school. Of course their work was voluntary. The state furnished free textbooks, but they were in many cases unfitted for the purpose. Other books, supplies, papers, magazines, etc., were donated and gotten together with the greatest difficulty.

Mr. Jacobs has a habit this year of taking with him outside people to "talk to his boys." This time it was Dr. Richard G. Boone, of the University of California. I watched the big audience as Dr. Boone talked. It responded to him, grasped his subtlest points, took in his humor, just the same as any other body of people would do. It compared very favorably, so far as looks and spirit went, with a big teachers' institute or association. Afterward, the men crowded around the lecturer to ask about this, comment upon that, exactly as the teachers do upon similar occasions with the same speaker upon a like topic. There is so much of bad in the best of us and so much of good in the worst of us that it doesn't become any of us to be too sure of his ground in judging some of us.

THE THACHER SCHOOL.

I lately had a chance to visit one of the most remarkable schools of the state, or indeed of any state, in the Thacher School, near Nordhoff, Ventura County. It is a private school, preparing boys for college, and conducted by Sherman Thacher and his brother William. Not all

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of us can send our youngsters there—the tuition fee is $1,100 per year, with extras.

Does that remove it from the pale of our interest and impel me to change the subject? Not at all. Let us look it all over with thoughtful care, and try to find some points that we can adopt to strengthen our public schools. If you look at the matter rightly the state is big enough and strong enough and rich enough to afford anything for the good of its children that *anyone* can.

'Tis a beautiful place, the Thacher School, tucked away in the brush-covered hills and the orange groves and the live oak slopes of the Ojai Valley, twenty miles inland from the sea at Ventura.

You'd never suspect it was there, a school of 50 boys, gathered in from all over the United States and from foreign lands as well, each with his saddle horse and his camp outfit, all studying Latin and mathematics, dominated by traditions of Yale.

The Thachers are the sons of old Professor Thacher, for generations the cultivated and scholarly head of the Latin Department at Yale. They came out some thirty years ago and were enraptured by the dry, clear and beautiful Ojai, where they hunted and camped for sport. Some young relatives joined them later. 'Twas such a splendid place to live, to recuperate from the climate and the culture of New England.

So, the place gradually grew to be a school, a school built by the fine scholarship and the high character of the brothers. They prepare a few boys for college, in the best way they know. Their standards are quite exacting. No cigarette smoking, boozing, candy kids need apply. They don't fit the environment at all. 'Tis no reformatory for spoiled darlings, but a place for honest effort and high-minded work. The school doesn't have to prove charges or consult the trustees when the wrong boy gets in—the wealthy parent is coldly informed in a very correct letter that his son does not harmonize with his surroundings and that he will be home on the 5 o'clock train. That is all. The places that knew him now know him no more.

I took dinner at the school. Fifty hearty fellows, bronzed, athletic, active, made quite a family. There were nine teachers among them, one or more at each table. I saw no throwing of biscuits. It seems profanation to even mention it. Six inches above each table was a smaller, revolving table, containing the salt, sugar, meat, mashed potatoes, gravy, and the other things that everybody used, so that each could supply his needs after the first helping without disturbing others.

In the early morning I walked about a little, all alone, and looked things over. The rocky hillsides were studded with many buildings; cottages for the Thachers; dormitories for the teachers and the boys; a

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fine school building; stables for the horses; barns for the dairy. Then there was a swimming pool, many tennis courts, baseball grounds, store houses, pergolas, porches, arbors. Between and among them all was a wealth of flower and foliage on vine and tree. Feathery peppers, tall eucalypti, orange and rose were everywhere. The native oaks and chamiso were preserved wherever possible and they lent variety to the scene. In a rocky basin was the outdoor theater, with natural rocks for seats, a little flat for a stage and a gurgling stream for a constant orchestra, all with great live oak trees for roof.

Each boy is compelled to care for his own horse, feeding, watering and grooming it; and cleaning out its stable, too! If there's one thing more than another that's calculated to keep a fellow democratic, to keep him in touch with the world and close to the ground, I imagine that something is acting as valet to a horse. He can't really turn up his nose at the common herd so long as he bears that rich horsey aroma himself. Sometimes mamma writes for Willie to be excused from this menial work, but no, Willie can't be excused. It's good for him.

Out in the yard stands a wooden horse with a packsaddle where the boys can practice in tightening cinches and throwing the diamond hitch. Often a group goes off into the mountains over Sunday.

The "rough house" was an interesting building. Two stories in height without floors or glass, it was yet a handsome structure. Inside, there was a gallery all around, and there were various ropes and ladders from the thick straw on the ground to the gallery above and to the square hole in the roof above that. Here the boys could come when they felt that way, and race and chase to their hearts' content, playing tag, playing horse, climbing and jumping, rolling and turning up and down, over and across, back and forward, as long and as hard as they would or could.

Maybe that's why they did not throw biscuits at the dinner table! The rough house is the safety valve for surplus animal spirits. Maybe the public school would better take note of that.

After observing Sherman Thacher and his work for a day or two, he seemed to me one of California's great men. His sturdy American citizenship, his stern Puritan conscience, his promptness to stand up instantly for all that is good and true and sincere, his steadfast faith in the right, his hatred of sham and fraud, all go to make him a valuable and a dependable man, of use to his kind. He is not only the principal of his private school, but is the leading trustee of a public school, the Ojai High School, and has been for years. He fetches and carries, and gives up his time and uses his machine for the public school as faithfully and as self-sacrificingly as any other California trustee does. Along with the other 10,000 unpaid trustees of the state, I salute him.

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CONSERVATORY OF MUSIC.

Now I have had a new school experience—so new and different that it almost seemed another continent or another world. It was attending the graduating exercises of the conservatory of music, at the Notre Dame College, a Catholic institution standing near the center of the city of San Jose.

This college wasn't built yesterday, and is not exactly new, even though I had never seen it before. In fact, it was founded long before I was born, in the year 1851. It occupies ten acres of land, in the heart of the city, with a high wall around it. Its beginning was when two Sisters of Notre Dame arrived at San Jose with a total capital of twenty-five cents, just driven away from an unsuccessful attempt of the same kind in Oregon.

Now, it possesses ten rich acres of city property, tall buildings, white arbors, great trees, ninety sisters, two hundred students and an age and dignity and experience that make the smartest and biggest of our schools look like the *nouveaux riche.*

I walked down to the college at 10 o'clock. The outside wall was grim, grey, cold, forbidding. I pressed the button. The big door was opened by a black clad sister, who sent for the superior to tell whether I should be admitted or not. Sister Veronica made me welcome, and sent me in charge of one of the teaching sisters, to a good seat in the auditorium.

Certainly, in the way of music, there is no other such ambitious and imposing institution in California. The great stage was set with a figure of the Saviour in the rear center, with rose colored lights and rich hangings all about, with eight big pianos on the sides and five tall golden harps in the front.

The vast auditorium was a blaze of color and light and life and animation. The archbishop's rich chair, in the front of the center, was the nucleus about which everything revolved. When he came swiftly in, bowing and saluting to right and left, attended by twenty-five priests, the exercises began. The students of the school were massed to right and left of the hall. The archbishop and the priests were in the front, with a large and dignified space between them and the stage. There was a very handsome and exact program, which was exactly followed, with no oral announcements or explanations whatever. Every performer, before going to the stage, knelt and kissed the archbishop's hand, and courtesied to him before resuming her seat. There were solos and duets and trios and quartets and sextettes and every other musical combination unknown to me. There was singing and harping and the music of the piano, the violin, the horn and all other instruments of string or brass or wood.

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An address was made by Archbishop Hanna. He is a most pleasing speaker, a skillful, polished orator, an able man. He was in a hard place, as the head and the center of the grand occasion, every eye marking him, his every move, every intonation, every fleeting expression observed and noted by hundreds every second. He carried it off well, as the gracious, approving, appreciative, intelligent master of it all.

One of the notable features was the way in which the teachers, the real managers of it all, rigorously effaced themselves—in strong contrast to our public school customs. No teacher was even seen—none mentioned by word of mouth or printed on the program. They must have been somewhere, to make everything move off so exactly, without halt or delay—but not so anybody knew it. An occasional click was heard behind the scenes, when some chorus or orchestra would start off—but nothing visible. Some original compositions were presented, in verse or music, and where the author's name would naturally be emblazoned in glory was only the modest initials "S. N. D."—Sister of Notre Dame.

Thus these good women work away for the helping of humanity year after year, quietly, unobstrusively, unknown to the world. They not only teach the music and the painting and all the other branches of the college, but the smaller children in the parochial schools all around as well—not only that, but they scrub and cook and serve and do all the other ten thousand things that are necessary to be done in order to lead a civilized life.

I always feel like throwing a bouquet of appreciation at the feet of these self-sacrificing souls who give themselves up to the service of the next generation and get out of it neither salary nor fine clothes nor public notice nor joy of life.

These visits to exceptional schools were made with the hope of finding something of value to apply to our work in the regular public school system. No school can afford to do more for the welfare of the children than the public school. We must be on the alert in every direction for improvements that can apply to them. It will be a sorry day when the people of California get the notion in their heads that some other school can give better advantages to their children than their own public school.

The law prescribes that the superintendent shall act as a member of the board of trustees for each of the following state institutions:

The State University at Berkeley.
The State Normal School at San Jose.
The State Normal School at Los Angeles.
The State Normal School at San Francisco.
The State Normal School at Chico.

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The State Normal School at San Diego.
The State Normal School at Santa Barbara.
The State Normal School at Fresno.
The State Normal School at Arcata.
The State Polytechnic School at San Luis Obispo.

It is clearly impossible for one individual to attend all the meetings of all these boards, in view of the number of meetings, the great distances apart and the many conflicting duties at the same time required by law. All that is physically possible is to go to occasional meetings, to go when necessary to make a quorum and to go when some business of great importance make attendance specially desirable.

Another activity is the apportionment of state school funds, which is accomplished by the faithful and painstaking assistance of the statistician, Job Wood, Jr. During the two years past we have apportioned $11,386,957.03 to the 58 counties of the state for elementary and $1,524,-752.91 for high schools. Roughly, this is 5½ millions per year for the elementary schools and three-quarters of a million per year for high schools.

Printing and distributing blanks and forms for the use of high and elementary schools is another important activity of the state office. Approximately $10,000 per year is expended in this way, all of which goes to the state printing office. The chief items are as follows for the biennium just past: School Laws, School Registers, School Reports, Circulars and Bulletins, Diplomas, Contracts, Notices, Election Papers, Teacher's Certificates and Apportionments.

The keeping of records and statistics is another and an important activity, in which the statistician figures largely. Every teacher, principal and city superintendent in the state is required by law to keep exact records throughout the term of the attendance, expenditure, condition and other vital facts of his or her school, reporting them under oath at the end of the term to the county superintendent of schools. The county superintendent makes herculean labors during the months of June and July to summarize and get together these teachers' reports in readiness to report them in turn to the Superintendent of Public Instruction under oath. There is then necessary several months of exacting labor to collate, assimilate, digest, arrange, combine, recombine, tabulate, interpret and otherwise manipulate the great mass of statistics, upon which the state superintendent must make his report to the Governor, under oath. Ten statements of general interest here follow, derived from these statistical tabulations for the past biennium, which will be found on later pages of this report.

First: The length of the school term has decreased during the past two years. The number of schools maintaining 160 days or less has

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risen from 482 in 1915 to 1018 in 1916, while those maintaining 200 days or more has fallen from 252 down to 20 in the same time. The average loss for every child in the state is six days.

The cause of this reduction in the length of the school term is to be found in the reduction of school money caused by the abolishing of the poll tax in 1914. There were $22,529.93 less paid for teachers' salaries in 1916 than in 1915.

Second: There is at present an unusual growth in the evening school, or night school, as it is often called. Particularly is this true in the case of the evening high school. This is largely due to an agitation throughout the state for the education of the adult foreigner, made by the Immigration and Housing Commission, and to the fact that a school opening an evening school is able to increase its attendance upon which state and county apportionment is based to such an extent that it nearly or quite maintains itself without local expenditure.

Third: The average cost per pupil in educating high school students has fallen from $87.19 in 1915 to $76.72 in 1916. This comes through the increase in evening schools, which are relatively cheaper. In these schools there is a great enrollment of students who attend a very short time and who therefore cost very little money per pupil. Adding them to the whole for the state reduces the average cost for all.

Fourth: Even the decreased cost of high school education is very high as compared with the common schools, where the average cost per pupil is $38.04, only half as much as the high school figure of $76.72.

The high school is twice as expensive because the course of study is so differentiated that very many small classes of children are the result, and small classes cost as much as large ones. It is the small high schools that raise the cost per capita. High school teachers cost more than those of the elementary grades.

Fifth: The teacher's certificate granted upon examination by county boards of education has almost disappeared. Only 416 such certificates were granted in 1915, whereas during the same time 5,215 were granted upon credentials from institutions in and out of California. I believe it wise, however, to retain this form of certificate as a safety valve, to still allow a small opportunity for the ambitious young person who can not go away for an education.

Sixth: In 1903 the legislature passed a permissive law for the consolidation of school districts, under the name of Union School Districts. Thirteen years afterward, in 1916, there are 27 such districts in existence. The list has not increased during the past year.

Seventh: The Rigdon Bill in 1915 provided a permissive law for a postgraduate grammar school course of two years in addition to the eighth grade, in the schools of California. Under this, postgraduate

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courses have been adopted in 46 schools, with an enrollment of 411 pupils.

Eighth: There were 17,840 teachers at work in the state at the end of the biennium. In the elementary schools the proportion of women to men is still growing, being now about 10 to 1. In the high school the proportion is not so great, being 2,389 women to 1,610 men, or 1½ to 1.

Ninth: The schools have been growing as a whole. The valuation of sites, buildings and furniture in the elementary schools has increased in two years from 55½ millions to 58½ millions, the high schools 23 millions to 26 millions.

The average daily attendance has risen from 331,000 to 341,000.

The enrollment of children has climbed from 415,792 to 423,562.

The total expenditures for the elementary schools, however, have increased very slightly, less than $1000 for the whole state, while the high schools, with only one-fourth as many children, have increased nearly $300,000—three hundred times as much.

Tenth: The total expenditure of the state for educational purposes during the year just past amounts to a total of $36,927,109.05. Of this, the kindergartens expended one-half a million, the elementary schools twenty-one and a half millions, the high schools ten millions, the state university three millions and other state institutions one and a half millions. The exact figures may be found on the last page of this report.

The following table will show the teachers employed in the elementary and in the high schools each year for the ten years ending June 30, 1916, the total gain in that period and the average gain per annum as well as the gain per cent:

TEACHERS EMPLOYED.

Year	Elementary schools		High schools	
	Men	Women	Men	Women
1907	813	7,433	420	768
1908	839	7,763	480	834
1909	901	8,177	566	924
1910	920	8,530	649	1,062
1911	983	8,941	783	1,213
1912	1,011	9,663	910	1,402
1913	1,085	10,468	1,049	1,595
1914	1,162	11,104	1,206	1,791
1915	1,202	11,767	1,394	1,989
1916	1,238	12,080	1,610	2,389
Total gain	425	4,647	1,190	1,621
Average yearly gain	42.5	464.7	119	162.1
Percentage of gain	52.3	62.5	283.3	212—

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The following table will show the total enrollment of pupils in the elementary and in the high schools and the average daily attendance per year for each of the ten years; the total gain, the average yearly gain and the percentage of gain:

ENROLLMENT OF PUPILS.

Year	Elementary schools	High schools	Average daily attendance	
			Elementary	High
1907	294,385	27,578	221,578	21,337
1908	298,295	32,014	232,325	24,267
1909	312,222	34,298	244,621	27,470
1910	322,361	39,115	252,321	30,893
1911	334,655	44,489	263,402	35,117
1912	356,945	47,420	280,485	38,181
1913	377,943	58,078	297,884	42,852
1914	402,024	65,927	319,229	48,312
1915	415,792	76,429	331,000	53,397
1916	423,562	95,405	340,943	58,881

The following will show the gains in boys and girls in each of the elementary and high schools:

	Elementary schools			High schools		
	Boys	Girls	Total	Boys	Girls	Total
Total gain	64,744	58,433	129,177	34,614	33,213	67,827
Average yearly gain	6,474	5,843	12,917	3,461	3,321	6,782
Percentage of gain	43	40.6	43.8	304.3	204.9	246—

The average daily attendance shows in the elementary schools 119,563 gain; an average yearly gain of 11,936; and a percentage of 53.8 gain. The high schools show a gain in average daily attendnce of 37,544; an average yearly gain of 3,754 and a gain in per cent of 176.

The following table will show the number of graduates from the elementary and from the high schools; the total gain for the ten years, the average yearly gain and the percentage of gain for each:

Year	Elementary schools			High schools		
	Boys	Girls	Total	Boys	Girls	Total
1907	5,371	7,312	12,683	1,100	1,790	2,890
1908	6,030	7,660	13,690	1,187	1,981	3,168
1909	7,314	8,799	16,113	1,495	2,281	3,776
1910	8,103	9,529	17,632	1,720	2,527	4,247
1911	8,671	9,774	18,445	1,864	2,892	4,756
1912	9,851	11,002	20,853	2,154	3,203	5,357
1913	11,794	10,695	22,489	2,606	3,951	6,557
1914	11,878	12,902	24,780	3,079	4,398	7,477
1915	13,480	14,029	27,509	3,525	4,851	8,376
1916	13,440	14,069	27,509	3,781	5,182	8,963
Total gain	8,069	6,757	14,826	2,681	3,392	6,073
Average yearly gain	807	676	1,482	268	339	607
Percentage of gain	151	92.4	117	243.7	133.7	210—

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The following table will show the expenditure by years for salary of teachers and the *total* for elementary and high schools by years for ten years:

Year	Expenditures for teaching		Total expenditures	
	Elementary	High	Elementary	High
1907	$5,943,075 78	$1,315,000 73	$9,497,857 76	$2,529,680 79
1908	6,862,706 96	1,635,578 18	10,988,221 89	3,154,935 52
1909	7,399,445 69	1,808,766 81	12,734,320 87	3,119,886 36
1910	7,927,081 03	2,162,117 65	13,674,214 19	4,090,967 26
1911	8,663,088 89	2,552,965 00	14,555,469 52	5,632,396 19
1912	9,472,440 96	3,026,023 83	16,910,430 55	6,862,735 76
1913	10,694,708 07	3,657,759 50	17,350,951 51	7,925,946 75
1914	11,752,150 24	4,264,376 78	18,297,912 99	7,969,768 74
1915	12,062,538 24	4,658,442 87	21,661,138 74	9,643,866 93
1916	12,040,008 31	5,266,521 40	21,662,075 23	9,913,739 95
Total gain	$6,096,932 53	$3,951,520 67	$12,164,219 47	$7,384,059 16
Average yearly gain	609,693 25	595,152 67	1,216,421 94	738,405 91
Gain, per cent	102.5	300+	128+	291+

The following table will show the cost per pupil per year for teacher's salary and for supplies; also the total gain for the ten-year period, the average gain and the per cent of gain:

AVERAGE COST PER PUPIL.

Year	For teachers' salaries		For supplies	
	Elementary schools	High schools	Elementary schools	High schools
1907	$26 82	$61 63	$7 06	$19 79
1908	20 93	67 47	6 30	20 12
1909	30 20	65 11	7 80	20 15
1910	31 41	70 00	8 98	21 32
1911	32 90	72 80	10 77	20 61
1912	34 00	79 25	9 55	30 17
1913	36 00	85 35	11 18	34 70
1914	36 81	88 27	9 90	30 01
1915	36 44	87 24	12 11	34 71
1916	38 24	91 14	11 30	30 55
Total gain	$11 42	$29 51	$4 24	$10 76
Average annual gain	1 14	2 95	42	1 07
Percentage of gain	42.6	48	60	54

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The following table will show the valuation of property in the elementary and high schools for the ten years beginning June 30, 1907, and ending June 30, 1916:

VALUATION OF PROPERTY.

Year	Elementary schools	High schools
1907	$26,977,787	$5,626,200
1908	28,066,826	6,571,382
1909	30,718,246	7,933,560
1910	34,714,167	9,601,274
1911	37,647,555	11,587,972
1912	38,879,480	14,211,162
1913	45,175,200	17,585,601
1914	49,157,272	19,412,613
1915	55,566,467	23,786,827
1916	58,600,496	26,588,670
Total gain	$31,622,709	$20,962.476
Yearly gain	3,162,270	2,096,247
Percentage of gain	117.2	369

The most remarkable showing in these tables is the fact that the enrollment in the elementary schools has increased 43 per cent for the boys and 40.6 per cent for the girls while the graduation has increased 151 per cent for the boys and 92.4 per cent for the girls. In the years gone by the boys were dropping out of the schools in the fifth and sixth grades. We are not holding all of them now but this showing is very creditable for the schools.

The high schools can not show such great gain in the graduation over enrollment as the night high schools have many thousands in them who are there simply from day to day to get certain work. This holds the cost per pupil down in these schools too. But the gain of 304.3 per cent in enrollment of boys and 204 per cent in the enrollment of girls with a gain in graduation of 243.7 per cent in the graduation of boys and 133.2 per cent in the graduation of girls is a very good showing. The fact that the schools are holding the boys indicates that they are meeting the needs of the people.

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DIRECTORY.

STATE BOARD OF EDUCATION.

(Appointed by the Governor.)

Name of member	Term expires	Address
E. P. Clarke	August, 1914	Riverside.
M B. Harrist	August, 1917	Fresno.
Mrs. O. Shepard Barnum	August, 1917	312 S. Fifth st., Alhambra.
Mrs. Agnes Ray	August, 1916	272 Twenty-third st., Oakland.
George W. Stone	August, 1916	Santa Cruz.
Marshall De Motte	August, 1915	Corning.
Charles A. Whitmore*	August, 1915	Visalia.

*Appointed to fill term left vacant by resignation of Lawrence E. Chenoweth of Bakersfield.
†Appointed to fill term left vacant by resignation of Wm. H. Langdon of Modesto.
NOTE.—Edward Hyatt, Superintendent of Public Instruction, is Secretary of the Board, according to law.

Assistant Superintendents of Public Instruction or Commissioners of Education.

(Appointed by State Board of Education. Took office January 1, 1914.)

Edwin R. Snyder, Commissioner of Vocational Education.....Santa Barbara
Will C. Wood, Commissioner of Secondary Schools.....Alameda
Margaret E. Schallenberger McNaught, Commissioner of Elementary Schools.....San Jose

Employees of State Board of Education.

C. S. Pixley, Chief Clerk.....Riverside
Mrs. Florence Argall, Stenographer.....Sacramento
Miss Marion H. Ketcham, Clerk.....Sacramento
Miss Eva E. Hays, Clerk.....Sacramento
Miss Mabel Baldwin, Stenographer.....San Francisco
Mrs. Marion G. Burgess, Stenographer.....Sacramento
Miss Abbie B. Telfer, Stenographer.....Sacramento

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County Superintendents of Schools.

(Term expires January, 1919.)

County	Name and address
Alameda	Geo. W. Frick, Oakland
Alpine	Mrs. Josephine Vallem, Sheridan, Nev.
Amador	Mrs. W. H. Greenhalgh*, Jackson
Butte	Mrs. Pearle Rutherford†, Oroville
Calaveras	Teresa Rivara, San Andreas
Colusa	Perle Sanderson, Colusa
Contra Costa	Wm. H. Hanlon, Martinez
Del Norte	Jos. M. Hamilton, Crescent City
El Dorado	S. B. Wilson, Placerville
Fresno	E. W. Lindsay, Fresno
Glenn	S. M. Chaney, Willows
Humboldt	Geo. Underwood, Eureka
Imperial	A. P. Shibley, El Centro
Inyo	Mrs. M. A. Clarke, Bishop
Kern	L. E. Chenoweth, Bakersfield
Kings	J. E. Meadows, Hanford
Lake	Minerva Ferguson, Lakeport
Lassen	F. Brunhouse, Susanville
Los Angeles	Mark Keppel, Los Angeles
Madera	Craig Cunningham, Madera
Marin	Jas. B. Davidson, San Rafael
Mariposa	John L. Dexter, Mariposa
Mendocino	Mrs. Anna Porterfield, Ukiah
Merced	Margaret Sheehy, Merced
Modoc	Mrs. Nettie B. Harris, Alturas
Mono	Mrs. A. M. Hays, Bridgeport
Monterey	Geo. Schultzberg, Salinas
Napa	Lena A. Jackson, Napa
Nevada	R. J. Fitzgerald, Nevada City
Orange	R. P. Mitchell, Santa Ana
Placer	Irene Burns, Auburn
Plumas	Mrs. Kate L. Donnelley, Quincy
Riverside	Raymond Cree, Riverside
Sacramento	Carolyne M. Webb, Sacramento
San Benito	W. J. Cagney, Hollister
San Bernardino	Mrs. Grace C. Stanley, San Bernardino
San Diego	John F. West, San Diego
San Francisco	Alfred Roncovieri, San Francisco
San Joaquin	John W. Anderson, Stockton
San Luis Obispo	W. S. Wight, San Luis Obispo
San Mateo	Roy W. Cloud, Redwood City
Santa Barbara	Mamie V. Lehner, Santa Barbara
Santa Clara	D. T. Bateman, San Jose
Santa Cruz	Chamn S. Price, Santa Cruz
Shasta	Mrs. Charlotte Cunningham, Redding
Sierra	Belle Alexander, Downieville
Siskiyou	W. H. Parker, Yreka
Solano	Dan H. White, Fairfield
Sonoma	Florence M. Barnes, Santa Rosa
Stanislaus	Frank Bacon, Modesto
Sutter	Lizzie Vagedes, Yuba City
Tehama	Mamie B. Lang, Red Bluff
Trinity	Maude I. Schroter, Weaverville
Tulare	J. E. Buckman, Visalia
Tuolumne	G. P. Morgan, Sonora
Ventura	Jas. E. Reynolds, Ventura
Yolo	Harriett S. Lee, Woodland
Yuba	Jennie Malaley, Marysville

*Superintendent Greenhalgh died February, 1916. Mrs. Greenhalgh was appointed to succeed.

†Mrs. Minnie Abrams died December, 1913. Mrs. Rutherford was appointed to succeed.

County superintendents are secretaries of their respective county boards of education.

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City Superintendents of Schools.

City	Name and county
Alameda	C. J. Du Four—Alameda
Alhambra	Charles E. Barber—Los Angeles
Bakersfield	D. W. Nelson—Kern
Berkeley	M. C. James—Alameda
Chico	Chas. H. Camper—Butte
Eureka	Geo. B. Albee—Humboldt
Fresno	C. C. Starr—Fresno
Long Beach	W. L. Stephens—Los Angeles
Los Angeles	J. H. Francis—Los Angeles
Marysville	Jennie Malaley—Yuba
Modesto	J. C. Templeton—Stanislaus
Oakland	A. C. Barker—Alameda
Oroville	H. P. Short—Butte
Palo Alto	Walter H. Nichols—Santa Clara
Pasadena	J. M. Rhodes—Los Angeles
Pomona	G. Vernon Bennett—Los Angeles
Richmond	W. T. Helms—Contra Costa
Riverside	A. N. Wheelock—Riverside
Sacramento	C. C. Hughes—Sacramento
Salinas	L. E. Kilkenny—Monterey
San Bernardino	Roy B. Stover—San Bernardino
San Diego	Duncan MacKinnon—San Diego
San Jose	Alex. Sherriffs—Santa Clara
San Luis Obispo	A. H. Mabley—San Luis Obispo
San Rafael	David R. Jones—Marin
Santa Ana	J. A. Cranston—Orange
Santa Barbara	A. C. Olney—Santa Barbara
Santa Cruz	J. W. Linscott—Santa Cruz
Santa Monica	Horace M. Rebok—Los Angeles
Santa Rosa	T. F. Brownscombe—Sonoma
Stockton	Ansel S. Williams—San Joaquin
Vallejo	G. V. Whaley—Solano
Ventura	A. L. Vincent—Ventura

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PART IV.

REPORTS OF COMMISSIONERS.

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LETTER OF TRANSMITTAL.

SACRAMENTO, CALIFORNIA, August 21, 1916.

The Honorable State Board of Education,
Sacramento, California.

LADIES AND GENTLEMEN:

In compliance with the state law of California—Political Code, section 1519—I have the honor to submit to you the biennial report of the Commissioner of Elementary Schools, beginning June 30, 1914, and closing June 30, 1916.

Very respectfully yours,

MARGARET SCHALLENBERGER MCNAUGHT,
Commissioner of Elementary Schools.

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BIENNIAL REPORT OF THE COMMISSIONER OF ELEMENTARY SCHOOLS.

Section 1520 of the Political Code defines the duties of the Elementary Commissioner of Schools as follows:

§1520. The Commissioner of Elementary Schools shall visit the elementary day and evening schools of the several counties of the state, and investigate the course of study adopted in such schools. He shall enforce the use of the state textbooks and shall report to the State Board of Education his findings, and shall make such recommendations to the State Board of Education as he may deem best, and shall perform such other duties as may be assigned by the Superintendent of Public Instruction, under the direction of the State Board of Education.

DUTIES OF THE OFFICE.

School visits.

Visits are made to schools for the purpose of coming into immediate touch with them and gaining a direct understanding of their various conditions; partly to carry to them information concerning the best things that are doing in like schools, elsewhere in the state, and partly to awaken trustees, teachers and parents to the needs of their schools and to excite in them a sympathy with the onward and upward movements that are carrying our educational processes to higher levels from year to year. Many such visits have been made, usually in company with the county or city superintendent, or his assistant, or a supervisor. The commissioner finds that it is best in making such visits to have a special object in view, *e. g.*, one period of four days' duration in the city of Los Angeles was divided as follows: one day was spent in visiting nature study classes, another in visiting music classes; evening schools were visited for the purpose of studying the education of the adult immigrant and two days were given to the study of school gardens. The presence of the supervisor is helpful, for it offers opportunity for questions and discussion. Sometimes, however, the commissioner has visited alone and very quietly.

In two counties nearly every school has been visited: San Benito, in the spring of 1915, and Placer County in the spring of 1916. Every school in San Benito County was visited, and all but three in Placer County. The time spent in San Benito County was six days; in Placer County, sixteen days. An address was made at every school visited and evening public addresses followed the day-time work.

In each of these educational tours the main object of the visit was improvement of conditions. The tour was a tour of inspection, and the superintendents, teachers, trustees, children and school patrons had

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been looking forward to it for several months. The county superintendent accompanied the commissioner in both instances.

Great improvements in school buildings and equipment, a general air of cleanliness and increased interest in school life all testified to the beneficial effects of this form of visitation. One immediate and most encouraging effect of this educational campaign was manifested when the supervisors of Placer County voluntarily raised the school tax seven cents.

There is no doubt that the people of each of these counties were benefited, not only by what the commissioner brought them, but by what they learned from one another. They were set thinking of the importance of education and of their responsibilities to the children, and they learned how much it helps toward the success of a school to have the people understand its aims and be actively interested in its welfare.

In serving the schools they were given a clearer conception of their own importance as helpers.

Other counties or portions of counties will be visited in the same way as time and opportunity permit.

Public addresses.

Addresses have been made upon request of those desiring them, unless conflict of engagements or necessary office work prevented. During the past two years 184 public addresses have been given, some of which required not a little special preparation, while others have been less formal in character. They have been given to various audiences as the following list indicates:

Parent-Teacher Associations,
Trustees' Conventions,
Civic Clubs,
Farm Adviser Conventions,
State Normal Schools,
University Farm School Students,
Country-Side Gatherings,
California Federation of Women's Clubs,
Daughters of the American Revolution,
Children in the Elementary Schools,
Boys and Girls in the High Schools,
Graduates of High Schools,
Graduates of Elementary Schools,
Audiences Assembled at Dedication of School Buildings,
Library Conventions and Students,
Teachers' Associations (State, County and City).
Faculties of Schools,
American Hygiene Association,
International Kindergarten Union Association,
Citizens Contemplating Formation of Union Schools.

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During the convention of the National Education Association, August, 1915, held in Oakland, the commissioner, having been elected chairman of the elementary section, was in charge of the program.

International jury of awards.

In April of the same year she served as a member of the International Jury of Awards at the Panama-Pacific International Exposition.

Legislation.

While the legislature was in session the commissioner gave her assistance to the committees on education.

TEXTBOOKS.

A textbook, if it is to be ideally serviceable, must be interesting both to the child who studies it and to the teacher who uses it as an aid in directing the growth of the child's mind.

Children are not all alike in their tendencies; teachers differ widely in knowledge and in skill. How then can it be hoped to choose textbooks for state-wide use which will serve equally well all of the children and all of the teachers? Because of the differences noted it is not possible to do this; but by taking thought and by taking time and by utilizing a number of able minds in honest, earnest, serious investigation, it is possible to choose textbooks that will serve all the children and all the teachers of a great state well.

In making this biennial report the commissioner wishes to restate what has been said in previous reports, namely, that the greatest care has been taken in the examination and choice of all books selected for the elementary schools, that the best of those submitted was selected each time, and that she is confident the results of the choices made will be in a high degree beneficial.

In the report of 1914 is found this statement: "The commissioner recommends that the State Board of Education take such action as will ensure the provision of the best reading and literature textbooks available for the elementary schools." Such action has been taken. It is with more than ordinary satisfaction that the report of the result of this action of your honorable board is made as follows:

In July, 1915, the State Board of Education adopted for the first and second grades the Free and Treadwell Primer, First and Second Reader; for the sixth, seventh and eighth grades, Literature Readers: the Sixth Year Literature Reader, the Seventh Year Literature Reader and the Eighth Year Literature Reader, written and compiled by Leroy E. Armstrong.

The Free and Treadwell Readers are content rather than method readers, though the teacher is not left helpless as to method, for a manual for teachers accompanies the books, providing a suggestive

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phonetic method. Admirably illustrated by the artist, Frederick Richardson, these books will be enjoyed by the children because they are beautiful and read by them because they are readable.

Adoptions and recommendations.

Bids have been advertised for a textbook in civics and such books are now being considered.

A speller bulletin was issued by the State Board of Education in 1915, and much information regarding the subject of spelling has come to the office as a result. The commissioner recommends that this information be carefully examined with a view to action by the State Board of Education on the adoption of a speller, since the contract for the books now in use has expired.

The contract for the textbook in hygiene expires in 1916. In making recommendations concerning adoption for this textbook the situation is complicated by a recent ruling of the Attorney General. Textbooks in hygiene, he rules, are under the law, section 1665 of the Political Code, not required. Those now in use, the Attorney General states, may continue to be printed, but no new adoption can be made. The commissioner recommends that steps be taken to amend the law now in force which prevents the adoption of another textbook in hygiene.

At the same time as the adoption of the Free and Treadwell Readers, the Holton-Curry Third Reader was selected. This book also is charmingly illustrated by Frederick Richardson. It, too, is an interesting book; it fits well into the series and is accompanied by a teachers' manual.

Never before has the state provided textbooks in reading for the upper grammar grades. These books will mean for many a boy and girl a new world, the world of literature. They have been written in such a way that they are the "good friends" of both teacher and pupil. Providing helpful study questions they save the busy teacher's time, while the "pleasure reading" suggestions lead the child from the textbook into a broader field of literature.

In July, 1915, also, the Zaner Writing Books were adopted. These compendiums give to each child a veritable textbook which in itself is a teacher. It is a system that has proved its efficiency so no risk is being taken in its adoption.

A new elementary history was adopted in July, Mace's Beginner's History. Well illustrated, grouping its facts around great American characters and containing an added chapter on great American women and a supplement, written by Percy F. Valentine, adopted in March, 1916, dealing with California history, this book is being warmly received.

In December, 1915, the State Board of Education adopted for the fourth and fifth grades the Progressive Road to Reading readers. Many changes were made in these readers as to grouping of selections,

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and new subject matter was introduced. Additional material for these books is still under consideration.

Advertisements calling for bids on language books have been published, the contract for those now in use having expired in 1916, and textbooks submitted are now being examined.

The contract for textbooks in geography also expired in 1916, but because of boundary changes likely to result from the war in Europe it is not deemed advisable to advertise for new geographies at this time.

Since the contracts for textbooks in arithmetic and in history for the upper grammar grades expire in 1918, it is suggested that preliminary examination of textbooks in these subjects be begun.

CALIFORNIA BLUE BULLETIN.

The value of the California Blue Bulletin, issued quarterly and edited in turn by the State Superintendent of Public Instruction and the three commissioners can not easily be estimated. Evidence that it is well serving the elementary schools is brought to the commissioner in letters of congratulation, in the cheerful co-operation of those who have contributed facts for publication, in an increasing number of requests from men and women interested in the progress of the public schools to have their names placed on the mailing list, and in repeated assurances of teachers and of trustees that it is a source of suggestion and of immediate helpfulness. In some school districts the children as well as the teacher look eagerly forward to its arrival.

The first number was issued March, 1915, the sixth and latest number in June, 1916. Of these the Commissioner of Elementary Schools edited No. 3, of Vol. I, and is to edit the next number, No. 3 of Vol. II. This publication goes to every district in the state, thus carrying to the youngest and the humblest and the most remote elementary teacher the same message as is received by those older or wiser or more centrally placed. It is a link as it should be between the central office and the common school, holding them together by means of its demonstration of common interests, common problems and common aims. No work connected with the office is more willingly undertaken than that which expresses itself in the columns of the Blue Bulletin.

OTHER BULLETINS.

Bulletin on good manners.

Realizing the difficulty of teaching morals and manners, subjects which are required by law to be taught, the commissioner has prepared as a help to the elementary teachers of the state a bulletin on good manners. In all education, manners should be taught as matters of sufficient value to be studied for themselves, not merely as minor parts of health laws, good conduct or school discipline. Advance chapters of "Suggestions for the Teaching of Good Manners in the Elementary

Schools" have appeared from time to time in the Blue Bulletin. In its completed form it will be printed as a supplement to No. 3, Vol. II, the next issue. Later it will be published as a separate bulletin.

Bulletin No. 13, Union of School Districts.

That there will always be one-room schoolhouses as long as there are people living too remote from one another to unite in maintaining a larger and better equipped school, is a matter of course. That such schools under inspiring teachers do good work is indisputable. The whole history of education, from the earliest days, proves it. Many of the world's ablest men learned their first lessons in such schools and received their first impulses in worthy ambitions from such teachers.

A progressive people, however, are never content that a former good stand fast, when opportunity offers advancement and improvement. Ample experience in every activity attests the superiority of large centers of co-operation and control over small ones. "In union there is strength" said the fathers of the republic when they combined for independence; and we who have profited by the independence they won should also profit by the wisdom their example teaches.

In order to call the attention of people of rural communities to the advantages to be gained by the formation, where feasible, of union school districts as provided for in section 1674 of the Political Code, Bulletin No 13, was issued in April, 1916. It has already proved its value. Hundreds of copies have been distributed, intelligent interest has been aroused, and it has done its part in bringing about what it is intended for: union of school districts.

Bulletin No. 15—Suggestions for the teaching of music in the rural elementary schools.

Music is one of the most important studies the state requires of its schools; but the present school law provides no textbooks for instruction in music. As a consequence, the methods of teaching music have been as various as the conditions of the schools and the dispositions of those in charge of them. In some of our cities where textbooks in music are provided out of the library fund and where competent instructors are employed to supervise the classroom teaching and practice, the instruction in music and the results obtained, are worthy of all commendation.

In many places, however, there is a lack of textbooks, of supervision, and of proper instruction; and too often a lack also of knowledge of available means of overcoming these disadvantages. To assist and promote the teaching of music in such schools a list of songs, at the request of the commissioner, has been prepared by the musical directors of the state normal schools, with titles of books and prices and names of publishers. Suggestions also are given for elementary voice training.

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This list and the suggestions have been printed and distributed during the past two months as Bulletin No. 15. It is too early yet to report upon the results of this publication further than to state that it is receiving a warm welcome. It is planned to follow this bulletin on music by others.

Bulletin on "Disposal of Sewage in Rural Districts."

A bulletin generously prepared by Mr. C. G. Gillespie, C. E., director of the Bureau of Sanitary Engineering, State Board of Health, with the assistance of the commissioner, on "Disposal of Sewage in Rural Districts" is now ready for publication. It is for the use of trustees and county superintendents, to aid them in their efforts in establishing sanitary conditions of school life.

The commissioner has long felt the need of such material and is confident that a message written especially for the use of these officials can not fail to have a special effect.

Union, rural and open-air schools.

The right of all children of a given community to equal opportunities of education is one that Thomas Jefferson might have included in the Declaration of Independence along with life, liberty and pursuit of happiness, as self-evident truths. Certainly no American of this generation would dispute it as an abstract proposition. We aim in every community to provide equal education for children, so far as the community is able to give it and the children are able to receive it. We fall far short, however, of attaining that aim and the failure is most discreditable in many rural districts where in spite of all improvements in farm machinery and household implements, better roadways and the substitution of motor cars for ox carts, and of all the thousand other results of advancing civilization "The Little Red Schoolhouse" remains much as it was in the days when the memories of pioneer school boys and girls made it a subject of sentiment along with the swimming hole and the picnic grove.

In our cities and towns, even in some of our small towns, the construction of school buildings and the systems of school instruction have gone in many ways beyond what was deemed "collegiate" fifty years ago, but in too many rural districts, the course of education flows feebly, or stagnates, in a one-room building where a single teacher tired to indifference or fretted to irritation, without the cheer of congenial companionship, teaches in wearisome iteration, all grades of elementary pupils in all kinds of elementary studies required by law to be taught.

The evil of this defective rural education has been felt and recognized all over the United States, and in every progressive community an earnest effort is under way to put an end to it. The plan adopted to that end is the elimination as far as possible of all one-room schools. In

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California we have a law providing for union schools; but our people are slow in taking advantage of it, yet no other educational movement in our state is more pressingly needed for the care of present ills, or imports more for the welfare of the future than does this. The object is to provide for the children of rural districts opportunities for school instruction that shall be approximately equal to those given to children of the cities. That equality can not be given in a one-room school taught by a single teacher.

Investigation discloses the fact that there are only 27 elementary union schools in the state, while there are over 2,300 one-room schools. Some of our county superintendents, however, are strongly urging "consolidations" wherever feasible and occasionally a union is made. Only a few days ago one was formed in Monterey County, but it required a high degree of direct effort on the part of the superintendent and his teachers, which was indirectly strengthened by means of the commissioner, the Federation of Women's Clubs, the Department of Agriculture of the University of California and the Department of Education of Stanford University.

One of the greatest objections to the plan is found in the problem of transportation. With the multiplication of good roads this objection is becoming less and less serious, but the present limitation of 15 cents per day for pupil transportation should be abolished.

The commissioner has been giving time and service to the furtherance of elementary union schools. A bulletin on the subject, prepared by Miss Martha M. Trimble and submitted by the commissioner, is doing much to spread knowledge among the people on the advantages to be gained in union of districts.

Rural school improvements.

In response to a request from the United States Bureau of Education, that a report be sent to Washington concerning a year's progress in rural community conditions, data has been gathered from various sources—educational, civic, governmental, etc. This data was collated by two Stanford graduate students, Mr. W. E. Baker and Mr. A. S. Krause, credit for the work being given in the Department of Education. The work has just been completed and was well done. It will be forwarded to Washington.

Open-air schools.

In co-operation with Mr. Guy P. Jones of the State Board of Health, a study was made last year of open-air schools in the state. It was learned that about 13,000 children, for part of the year at least, are housed in open-air schools and nearly half of these are in rural districts. While it must not be assumed that these buildings are all what might be called "standard" open-air schools, yet they are so designated in

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their communities. This term shows that a movement in the right direction has been begun, that a certain amount of interest and intelligence in regard to good air exists, and are bound to find expression sooner or later in all school architecture. The open-air court around which many schools are being built shows the effect of the influence of open-air schools on school architecture. There is no state in the union in which climatic conditions are more favorable to large numbers of open-air schools than California. The commissioner is advocating these buildings or modifications of them wherever it is practicable to build them.

RECOMMENDATIONS.

During the past year the elementary schools of the state, the schools in which all children of the state receiving public education must be trained, the schools which are the direct avenue to the high schools and to the university, the schools which furnish the only schooling ever obtained by the great mass of our citizens: during the past year these schools from lack of money to finance them have been forced to shorten the school term.

The schools which have suffered most are usually the rural schools of sparsely settled communities, though Los Angeles County has shortened her school term 13 days, and San Francisco (city and county) 17 days. The average loss for the state is 8 days. Thirty-eight counties have thus suffered, the loss of time varying from 1 to 19 days.

This brings before us the serious consideration of an increase of funds for the maintenance of the elementary schools.

How much of this should be provided by the state and how much should come from county taxation ought also to be determined. While the state is giving and should continue to give help to the most humble and remote school within her borders, yet the counties should not be negligent nor should local communities of districts be made to bear an undue proportion of the responsibility of providing adequate funds to finance the elementary schools, as for example, is the condition in Los Angeles County.

The following eighteen counties of the state are not providing as much money as the state gives: Alpine, Amador, El Dorado, Lake, Los Angeles, Mendocino, Nevada, Riverside, San Bernardino, San Diego, San Joaquin, San Luis Obispo, Shasta, Sierra, Siskiyou, Sonoma, Stanislaus, Tuolumne.

In view of these facts, the commissioner recommends such legislation as will provide sufficient funds to enable all elementary schools in the state to maintain a school term of at least 180 days.

The rural teacher working alone, unsupervised, which means uncriticised, unencouraged, and uninspired must needs have a high degree of

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initiative, perseverance and devotion if she steadily holds throughout years of service the ideals with which she began her work and must possess these qualities in an extraordinary degree if she raises them. Too often she loses courage and either leaves the rural school for one which offers better conditions for growth in the city, or becomes more and more a school keeper and less and less a school teacher.

Among our state normal school faculties who train teachers *for* the profession there are certain members who are peculiarly well-fitted to train teachers *in* the profession. The state is not taking advantage of this talent. Moreover, no matter how able an instructor may be, his efficiency is greatly increased by first-hand knowledge concerning that which he is teaching.

Therefore in order to provide some measure of supervision, which means giving knowledge, criticism, encouragement and inspiration, for all teachers in service; in order to make use of a power already at hand in our normal schools, available but neglected; and in order to improve the teaching service of the normal schools themselves, the commissioner recommends that each of the eight state normal schools be provided with funds sufficient for keeping one member of the faculty—not the same one—continuously in the field throughout the school year, whose duty it shall be to visit and supervise, in co-operation with the county superintendent, elementary teachers outside of cities.

The law providing for the transportation of pupils—section 1617—twenty-second—limits the cost to the district to not more than fifteen cents per pupil transported per day. This law frequently prevents the formation of union elementary schools. The commissioner recommends therefore that this law be amended in such a way as to leave the matter of cost of transportation to the union school in the hands of the trustees of the various districts forming the union and the county superintendent of schools.

The present enrollment in the elementary schools is 423,562, a gain of 7,770 over the enrollment of the previous year and of 21,538 over the enrollment for 1914.

The average daily attendance for the past year is 340,943, a gain of 9,943 over that of 1915, and 21,714 over that of 1914.

The striking fact in these figures is that while the net gain in enrollment for the present school year is 7,770, the net gain in average daily attendance is 9,943.

This gain in average daily attendance is most gratifying and is all the more striking when the fact of evening schools is considered. These schools, because of the personnel of the pupils, can not keep up a high standard of average daily attendance. Yet, notwithstanding this element of loss, the net gain for the state is 9,943.

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The causes for this condition can not at this time be accurately determined. They may be due to better general health conditions, to better service of the truant officer and of the city school nurse, to more attractive courses of study which tend to hold the children in school, or to the law providing a new method for counting attendance, which went into effect at the beginning of the last school year; or they may be due to a combination of all of these.

Since the abolition of the poll tax the elementary schools have been greatly hampered by the loss of income. Terms have been shortened, necessary improvements have been blocked, schools overcrowded, and teachers handicapped for lack of equipment. The loss to the elementary schools last year, due to the abolition of the poll tax, was about $180,000. This year it will reach at least $200,000. The total expenditures for the elementary schools have increased hardly at all. They are less than $1,000 for the whole state, while the high school expenditures have increased during the same time nearly $300,000 and the high school enrollment is only about one-fourth that of the elementary schools. The commissioner recommends, therefore, in order to give to the elementary schools an adequate sum for their maintenance and needed improvements, that the basis of compilation upon which the State Controller transfers funds from the general fund of the state to the school fund be not less than twenty dollars for each child in average daily attendance in the elementary schools.

While there are good teachers everywhere that are not professionally trained, yet undoubtedly these same teachers professionally trained would render better service. It is the desire of the state to have each of her servants give the best service of which he is capable. Opportunities for training by means of our eight normal schools have increased to such an extent that the cases are rare of inability to obtain professional training without entailing hardship on the one seeking it.

The commissioner called attention in her last report to the comparatively few certificates now granted upon examination. She also recommended in that report raising the standard of those eligible to examination for elementary certificates to that of high school graduates. This law was passed and limits to a certain extent those applying to be certificated on examination.

In order that each county in the state may exercise the greatest care possible in certificating elementary teachers and in order to provide a greater number of professionally trained teachers, the commissioner recommends that a law be passed which shall provide that no certificate granted on examination in one county shall be valid in another.

In order to serve trustees and school patrons interested in providing the best possible schools, the commissioner recommends that a bulletin be prepared at an early date, under the direction of the State Board

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of Education, containing plans for rural school buildings, the plans to be drawn and described in such a way as to be of direct and practicable service. Among these plans the open-air school should find a place.

In view of the fact that it is impossible to provide a textbook in hygiene other than the book now in use, and that no textbook in music can be adopted, the commissioner recommends that the laws now in force concerning the adoption of state textbooks be so amended as to make adoptions of all statutory textbooks discretionary with the State Board of Education.

More and more reasons are being advanced for giving to the children of the elementary schools their textbooks outright, with a requirement that in case of loss or serious injury they be replaced at private expense. Chief among these reasons is that of sanitation. The clean, healthy child, it is urged, should not be compelled to use textbooks which have been handled for a year or more by those that are uncleanly or unhealthy, or both.

Moreover, it is generally admitted that the interchange of textbooks is a means of spreading contagious diseases. When a contagious disease is prevalent, those who are ill are out of school. Average daily attendance is a factor of high importance in the school revenue. It is obvious, therefore, that it is not in accordance with good business policy for the school to take chances, through the common use of textbooks, of lowering the average daily attendance.

The commissioner recommends, in order to protect the health of the elementary school children of the state and in order to safeguard the school revenue, as well as for aesthetic and other reasons, that the State Board of Education take such action as will ensure to these children the free gift by the state of their textbooks.

Recognizing the value to school trustees, superintendents and teachers of the state, of a knowledge of the office and work of the State Board of Education as given directly to them by the members themselves, the commissioner recommends that your honorable board extend as far as possible its policy of visiting schools, attending teachers' institutes and other educational gatherings, trustees' conventions, etc., making addresses and taking part in discussions as occasion offers.

In order to provide better opportunities for the children of the small rural districts, the commissioner recommends such legislation as will prevent the lapsing of the district, but will permit any number of children less than eight to attend temporarily the nearest convenient school and that the appropriation of the school money be transferred to the school attended.

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STANDARDIZATION OF STATE NORMAL SCHOOLS.

In standardizing the state normal schools the State Board of Education has performed the greatest service which has been rendered the elementary schools during the biennium.

Irregularity in the training offered students in these schools has been puzzling to those employing teachers, and confusing to the children taught. Much that has long been required by law has now been definitely provided for. No normal school has lost its individuality, yet a definite policy has been outlined for all of them which will make clearer the meaning of a state normal school diploma. Trustees in engaging a teacher will know what to expect.

(1) Certainly it is not asking too much to require of teachers who are to teach the common branches that they themselves know these branches. This knowledge is now assured—students, before graduation, must have passed a satisfactory examination or completed courses in the normal school in reading, writing, spelling, English grammar, composition, arithmetic and geography.

(2) Graduates of normal schools serve a sort of apprenticeship for two or three years in the rural schools. City boards of education require this. It is essential, therefore, that the children of the rural schools be safeguarded. Standardization does safeguard them.

At present it is the exception that a teacher of a one- or two-room school—and there are nearly 3,000 such schools in the state—is qualified to teach elementary science. We hear much about the value of intermediate schools as directly serving the need in this respect for our upper grade grammar children, but where there are no intermediate schools, or even union elementary schools, children are given either no instruction in science or mere book instruction, which often kills the desire for its further study. Standardization will provide the rural schools with teachers who can teach applied elementary science.

Music, though one of the required subjects, is not taught at all in some hundreds of schools, in other hundreds mere rote singing, undirected and uncriticized, is all the activity noticeable. No teacher may be graduated now from the normal school who has not had at least a year's training in music.

Elements of Agriculture, Elements of Applied Sociology, Physical Education and School Playground work are all emphasized, giving the elementary teacher a broader outlook on life and keeping her constantly in mind that she is teaching children and not subjects.

In uniting the work of the high school with that of the normal school, attention to the would-be teacher is brought six years before she is ready to qualify for service instead of, as too frequently happens, two years. It is obvious that one, whose choice of a profession has been made, brings to the study of any subject a certain attitude of mind that is of

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great value. The four years' training in high school will be made to count for teaching as well as for life.

A sufficient number of electives are provided for to enable a student to specialize to a certain degree along the lines of individual tendency. Standardization does not mean machine-made teachers.

Already the new ruling is having results in additions made to high school courses and in efforts on the part of high schools for better preparation in the elementary schools. A letter recently received by the commissioner from the principal of a rural high school urges her to place before the district trustees the necessity of employing teachers for the elementary schools who can and will teach music, as it is impossible to give adequate training in music in high schools to unprepared pupils. Thus pressure will be brought from various sources to the end that the elementary schools will be taught by men and women who are qualified to teach them. The teacher is the most important factor in elementary education.

CO-OPERATIVE FORCES.

In the first annual report covering the period from January 1, 1914, to June 30, 1914, the Commissioner of Elementary Schools in setting forth the intent of the legislature in creating the office, directed attention to the various educational agencies in the state which either directly or indirectly affected the work of the elementary schools, and were therefore to a greater or less extent co-operative with the newly-created office. It is evident that the efficiency of the office depends largely upon the degree of co-operation with which mutually interacting forces can be brought into harmony so that their joint action may be directed to the best attainable ends in each successive year of school work.

It is with gratification, therefore, that the Commissioner of Elementary Schools is able to give in this biennial report an appreciative recognition of helpful work done for the elementary schools not only by educational officers, educational departments in various institutions and educational organizations: members of boards of education, faculties of normal and high schools, principals and teachers of elementary schools and professors in the departments of education of our two great universities, the California State Teachers Association with its Council of Education and other organizations of teachers; but by governmental agencies of the state and voluntary associations of citizens organized for social service of various kinds. The fact that these state and voluntary agencies are not directly connected with the public school system makes their service of peculiar interest.

It is especially gratifying that the aid given voluntarily has been directed mainly toward improving the conditions of the schools of districts remote from the centers of wealth and culture. These rural

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schools have to face some of the most serious problems of elementary teaching, and in the cases of many such schools, the solution of these problems is made more difficult by lack of funds, sparseness of settlement, insufficient means of communication and lack of understanding of the real needs of boys and girls in the way of school instruction and school equipment in our time.

Much service rendered the common schools by these various agencies is of such a nature that it does not come strongly into the foreground of public consciousness, but when an insanitary, old schoolhouse, long past its usefulness, carelessly set in the center of a small, bare schoolyard, is replaced by a comfortable, modern, well-equipped building, surrounded by acres of grounds shaded by fine trees and having ample space for playgrounds and garden plots, illustration is offered of the effect of the work of these agencies.

The state agencies whose aid in advocating various movements for improvement in the elementary schools during the past two years has been most marked by distinct achievements are:

The State Commission of Immigration and Housing,
The State Board of Health,
The State Library,
The State Board of Forestry,
The College of Agriculture of the University of California.

The volunteer agencies are:

The California Association for the Study and Prevention of Tuberculosis,
The California Federation of Women's Clubs,
The California Congress of Mothers and Parent-Teacher Association,
The Daughters of the American Revolution.

The work of each of these has been so extensive and so full of import for the immediate future, as to require specific report as follows:

COMMISSION OF IMMIGRATION AND HOUSING.

A law providing for the Home Teacher was passed in 1915. This law had its origin and received its chief support from the Commission of Immigration and Housing. It provides for the employment of home teachers by school trustees or city boards of education. These teachers are to work in the homes of the pupils, instructing both children and adults. Two such teachers are now at work, one in Los Angeles, one in San Francisco.

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A report of work done in Los Angeles with practical suggestions has been published in a leaflet by the Commission of Immigration and Housing, entitled, "The Home Teacher." This work in the homes is good work and is highly beneficial for the education of special classes who in no better way can be educated, most of whom, in fact, in no other way would be educated, and the education of parents always reacts favorably upon that of their children. Unfortunately funds for carrying on this form of education have not been sufficient for an extensive demonstration of its efficiency.

In its efforts to bring about a wider distribution of immigrants within the state, relieving thereby congestion and slum problems that result therefrom, the Commission of Immigration and Housing heartily favors whatever tends to improve the elementary schools of the country. The commission finds that the stranger comes here to improve the educational opportunities of his children. Observing that these opportunities are greater in the city than in the country, immigrants crowd into the populous centers and shun the rural districts. Moreover, our immigrant is a playfolk, and the country offers few opportunities for social intercourse. Immigration Leaflet No. 4 contains the following pertinent statements:

Union of school districts.

"Co-operating with the proper authorities, we propose doing our share toward bringing the country school up to the highest possible efficiency, to show how it may be used as a social and recreational center, for both child and adult. To this end, having received permission from the State Board of Education, this commission reprinted the working plan of a state educational bulletin entitled 'Union of School Districts.'"

The reprint has been widely distributed and not only gives public approval but directly lends assistance to measures advocated by your honorable board for increasing and improving elementary education by means of union schools. The commissioner highly appreciates the beneficial effect of this co-operation.

The attitude of the Commission of Immigration and Housing is one of earnest determination to initiate movements and encourage those already in process for the reduction of the percentage of illiteracy in the state. Since one of the objects of the public school system is to safeguard our children from the limitations of illiteracy, it is apparent that these activities of the Commission of Immigration and Housing are noted with interest and followed with great expectation by the Commissioner of Elementary Schools.

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STATE BOARD OF HEALTH.

The State Board of Health issues a monthly bulletin. It is the purpose of those who have the publication in charge to carry one or two articles in each number which shall deal directly or indirectly with the public schools. Among others which have appeared during the past two years are the following:

Sanitation of the Rural School,
Rural Schools Need Attention—(Editorial),
The Value of a Day in School—(Editorial),
Rural Nursing in California,
Parental Supervision versus Medical School Inspection,
For Your Child,
Protect the Children,
That Cold,
Mental Health of Children,
Rural School Trustees Improve Sanitation—(Editorial),
Courses in Public Health Standardized.

Attention of teachers, parent-teacher associations, trustees and others interested has from time to time been called to these publications by the commissioner. They are intended to be practically helpful, and they are. A growing interest in them on the part of superintendents and teachers is noticeable. They serve to bring the schools and the State Board of Health into closer connection and to establish relations which can not fail to react favorably upon education.

Clean schools.

In his sound advice concerning cleanliness in the schools, Dr. Wilbur A. Sawyer, Secretary of the State Board of Health, makes a plea that ought to be understood, not only by experts in the field of sanitation, but by the plain man of the farm or the street. A plentiful and thoughtful use of soap and water on the surface of objects—floors, desks, doorknobs, etc.—is a far more powerful protection to health than is fumigation, he tells us.

It is therefore apparent that excellence of janitor service is a consideration of serious import. Too often it is the last and least consideration of boards of education and school trustees.

The commissioner has been using Dr. Sawyer's opinion as that of a state health officer in her endeavor to bring about better living conditions for teachers and children, and takes this opportunity to recognize and express appreciation, not only of co-operation, but of initiative in this commonly neglected matter of clean schools.

The county nurse.

In May, 1915, the State Board of Health made a temporary appointment and sent a county school nurse into Mendocino County for eight

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weeks. October 1, 1916, it is planned to send this rural nurse into other counties. The work of the county school nurse is reported under another heading.

Bulletin on sanitation.

Not only is the State Board of Health of assistance by means of its own activities, but it willingly lends a hand in furthering the projects of the State Board of Education; for example, as stated above, Mr. C. G. Gillespie, C. E., Director of the Bureau of Sanitary Engineering, State Board of Health, has recently, at the request of the commissioner, prepared with her assistance a bulletin for the use of rural communities, especially for the use of superintendents, teachers, and school trustees, on "Disposal of Sewage in Rural Districts." This bulletin is fully illustrated and will undoubtedly be widely and profitably read. It is most encouraging to be given the support of a state department, the work of which so closely touches that of education.

THE STATE LIBRARY.

The California schools are fortunate in having a state library that has interested itself in and developed a plan for complete library service to the state. In carrying out these plans it is doing much for the cause of elementary education. In its efforts to establish in every county in the state a county free library and to encourage the affiliation of the school district libraries with this county library, as provided for under section 1715 of the Political Code, it is increasing immensely the book privileges, not only of adults in communities, but also of the children in the elementary schools. There are now 30 county free libraries in operation, and the state library is still sending out its organizers to the end that eventually all counties in the state shall have this service. The state library also sends out a school library organizer to assist the county superintendents of schools and the county librarians in explaining what the advantages of the free library service are and how the school districts may take advantage of it. It is obvious that this activity on the part of the state library is of great value to schools, as co-operation with the county free library is rapidly solving all the problems of library service for teachers and for pupils.

That the schools are profiting by these efforts made in their behalf is illustrated by the following figures showing the progress during the last two years made in library service to the state:

County Free Libraries.

	July 1, 1914	July 1, 1916
Established	26	35
In operation	23	30
Annual income	$244,967 98	$481,751 55
Books, etc.	174,241	537,242
Branches	752	1,893
School districts that have joined	183	728

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The library service as it is being conducted in California is a vital, co-ordinate part of education. These few figures show that the progress which the plan has made within the last two years has been steady. Compared with that of other states, it has been extraordinary.

Union schools.

The state library has also been helpful in furthering for its own purposes a movement advanced by the State Board of Education. In order that the affiliated school libraries may receive the best service possible, and that branch libraries may find place in accessible centers, the state library is co-operating with the State Board of Education in setting forth the advantages to be derived from union schools by means of union of school districts, as provided for in section 1674 of the Political Code. Each county librarian is kept informed of all the facts gathered by the commissioner concerning these unions in order that she may be a source of knowledge and suggestion to citizens regarding their educational, social and economic advantages.

STATE BOARD OF FORESTRY.

In a bulletin issued in 1915 entitled, "A Handbook of Forest Protection," by the State Board of Forestry, is an article addressed to teachers, calling their attention forcefully to the value of impressing upon their pupils the importance of protecting the forests and asking them to instruct the children regarding carelessness in building fires in or near forests.

Children often heed advice that comes to them with the authority of a distant state office which they do not so readily attend to when given by a teacher whom they see and hear every day. This article discussed with the children by teachers has had its good effect. It is not an effect which can be put into figures, but nevertheless teachers well understand its value.

Another bulletin on trees.

In addition to this service the forestry department has in preparation a bulletin which will deal with all trees native to California suitable for ornamental purposes, together with species introduced from other parts of the world which have proved valuable for shade and decorative planting in any part of the state. This bulletin, distributed free, will be of much worth to rural communities with their highways and schools as well as to those interested in city street and park planting. There is a growing interest in improvement of school surroundings. It is the aim of some of the county superintendents in the state to make of every school ground "a beauty spot." Surely such a publication as this one planned by the State Board of Forestry will be received with interest and used to advantage.

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COLLEGE OF AGRICULTURE OF THE UNIVERSITY OF CALIFORNIA.

The College of Agriculture of the state university is peculiarly fitted to be of help to the elementary schools, not only through its extension work for adults which is obviously indirectly of value but because of help which is now made possible by means of the Smith-Lever fund. California received from this fund, in 1915, $32,054.00 which was disbursed by the state leader, the head of the College of Agriculture of the state university.

Partially supported by the Smith-Lever fund, fourteen counties of the state employ farm advisers. Certain of these advisers have been directly helpful to the county superintendents and the more progressive trustees in raising the standards of rural schools. They have also taken an interest in school gardens and home gardens which the elementary boys and girls, encouraged by their teachers and the superintendent, are attempting to cultivate. This service is valuable and is greatly appreciated, but being voluntary, is often irregular, and it is not far-reaching.

One hundred and seven high schools in the state, aided by the Smith-Lever fund, form among their students boys' agricultural clubs which have been unusually successful. There are 1,157 boys growing crops under the direction of the state university. In 1915, 8,270 of the boys who enrolled in the contests successfully completed them and passed in reports of their work.

Up to the present time, however, nothing of note has been done for the boys and girls of elementary school age, though in most other states of the country the younger children also are sharers in the benefits of this fund; they are members of agricultural clubs or of home economics clubs and are provided with instructors and supervisors as are boys and girls of more advanced age. The plan in California is unique. It may be described as the "Big Brother Plan." It aims to form leaders among the older boys who will be interested in and who will further the projects of the elementary children by helping to start them and by aiding the appointed supervisor and the farm adviser in seeing that they are carried through to the end. The Commissioner of Elementary Schools is convinced that this agricultural club work is highly important for both boys and girls and recommends that our local authorities in the counties (county superintendents and boards of supervisors) co-operate with the College of Agriculture of the state university, to the end that supervisors of agricultural club projects may be appointed who shall form clubs among the boys and girls of the elementary schools and who shall instruct and supervise these children in their efforts to carry through their projects.

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Ornamentation of elementary school grounds.

No school grounds needing improvement need suffer from lack of instruction as to how to improve them. The Division of Landscape Gardening and Floriculture, College of Agriculture, offers to send to any principal, superintendent or board of education in California a collection of landscape plans for the improvement of school grounds, plans which are both suggestive and practical. The commissioner has given publicity to this generous offer through the columns of the Blue Bulletin.

In addition to this Professor J. W. Gregg of this same department has consented to write a bulletin on the "Ornamentation of Elementary School Grounds" which, written especially for the elementary schools, can not fail to be even more serviceable to them.

CALIFORNIA ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.

Whatever differences of opinion may exist regarding medical examination of school children, the school nurse in cities is recognized as directly and indirectly beneficial. She is a link between home and school and often is more helpful than the truant officer in accounting for the absence of children from school.

The county nurse.

The county nurse, who serves the homes and the school children of the small towns and rural districts in somewhat the same manner as the city nurse serves urban communities, is in California an innovation. A few of the smaller towns and communities support nurses provided for by private funds and the expenses of a county nurse for the poor of San Mateo County were met, for seven years, by Mrs. Whitelaw Reid, but the first county school nurse was installed in Placer County, January 1, 1915, under the direction of the California Association for the Study and Prevention of Tuberculosis. A bequest of the late Mr. Dohrmann of San Francisco provided the necessary funds for this service. This nurse during the period from January 1st to May 1st visited forty-one of the fifty-four schools in Placer County and examined 2,067 pupils. Of these only 453 were found to be free from defects. In addition to the examination of the school children, she visited many of their homes, made public addresses in which she preached the doctrine of cleanliness, fresh air, sunshine, proper exercise and nourishing food and was instrumental in improving not only the general living conditions of whole communities, but the teeth, eyesight, hearing, breathing, etc., of children needing special attention.

In May, 1915, the State Board of Health made a temporary appointment for two months and sent this nurse into Mendocino County. Here 1,485 school children were examined, of whom 276 were found

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without defects. The same sort of inspection, visiting and suggestion were continued in this county with approximately the same results.

In September, 1916, a county nurse, under the direction of the California Association for the Study and Prevention of Tuberculosis, will begin work in Monterey County and later will be transferred to Ventura County. (The State Board of Health will also have a rural nurse, available October 1st.)

Submission to inspection is not compulsory. The nurse is sent into the county and is available for use for a certain length of time, but no district is obliged to accept her services. There appears to be a general desire, however, on the part of county superintendents, trustees, parents and teachers for the benefits offered. Already nine counties have requested the services of the rural nurse who is to begin work October 1st.

The experiment is proving valuable; it is hoped that money may be obtained in sufficient amount to enable every county in the state to test its efficiency.

In rendering a special service that no other school officer can so well render by promoting ideas of right living and suggesting the procedure for the correction of defects too often caused through wrong living, the commissioner feels that the county nurse is a contribution to the school force of no small importance for elementary education in rural and semirural communities, and has heartily welcomed and endorsed this aid offered by the California Association for the Study and Prevention of Tuberculosis.

CALIFORNIA FEDERATION OF WOMEN'S CLUBS.

The California Federation of Women's Clubs is an organization of 40,000 women. During the past year three departments of the federation, namely, the departments of Education, of Social and Industrial Conditions and of Country Life, centered their activities on improvement of rural conditions throughout the state and chose a special helper who was called Commissioner of Rural Schools to work with them. They selected as their chief objects of attention union or consolidated schools, civic centers, evening schools and teacherages or teachers' cottages. The Commissioner of Rural Schools prepared an outline setting forth the advantages of the union school. This was printed in the "Clubwoman," the official organ of the California Federation of Women's Clubs. So much that was directly serviceable for elementary education was contained in this outline that it was reprinted by permission by the State Board of Education and has been widely and advantageously distributed by the commissioner. Many other illustrations of valuable service to the elementary schools

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could be cited. This one is sufficient to show the character of activity displayed by this large and alert body of women and its helpful effect as an educational force.

CALIFORNIA CONGRESS OF MOTHERS.

The Congress of Mothers and Parent-Teacher Association, as its name indicates, is directly committed to education. Its enrollment is not so large as that of the California Federation of Women's Clubs but it, too, is a strong and growing organization, having this year about 18,000 members.

The commissioner, in going about the state, notes that schools in which parent-teacher associations are operative are relatively more progressive and efficient than those which do not receive such help. Especially valuable are they when certain of their meetings are held in the evening and are attended by men as well as by women. In some clubs the chief offices are held by men.

Because the schools and the homes must work together if children are to be wisely educated, and because the parent-teacher associations are endeavoring to bring about this unity of action, the formation of these clubs in connection with the schools is not only advocated, but is urged by the commissioner as a matter of high importance to the progress of elementary education.

DAUGHTERS OF THE AMERICAN REVOLUTION.

Good citizenship, patriotism and respect for the Flag are educational aims which have engaged the attention and received the aid of the Daughters of the American Revolution. This organization has not only expressed its interest in words, but has shown it in the presentation to the schools of national flags to be used in teaching lessons of loyalty. Once more we have an illustration of a valuable agency heartily co-operating with public school officers for the benefit of children.

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LETTER OF TRANSMITTAL.

SACRAMENTO, CALIFORNIA,
September 14, 1916.

The Honorable State Board of Education,
Sacramento, California.

LADIES AND GENTLEMEN:

In accordance with the provisions of section 1519 of the Political Code of California, I submit herewith the second and third annual reports of the Commissioner of Secondary Schools. As required by resolution of your honorable board, I have combined the report for the year ending June 30, 1915, with the report for the year ending June 30, 1916.

Very respectfully yours

WILL C. WOOD,
Commissioner of Secondary Schools.

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BIENNIAL REPORT OF COMMISSIONER OF SECONDARY SCHOOLS.

The duties of the Commissioner of Secondary Schools are defined in section 1520 of the Political Code as follows:

> "The commissioner of secondary schools shall visit and investigate the secondary day and evening schools of the several counties of the state. He may recommend changes in the courses of study and shall investigate all contracts with textbook companies and see that they comply with the law, and shall perform such other duties as may be assigned by the superintendent of public instruction, under the direction of the state board of education."

In section 1752 of the Political Code it is provided that "the commissioner of secondary schools shall be ex officio chairman of each (high school principals') convention and shall have charge of the program thereof."

For the purpose of this report, the duties are segregated as follows:

(1) Visits, conferences and addresses.
(2) Investigations.
(3) Recommendations concerning courses of study.
(4) Enforcement of high school textbook law.
(5) Duties as chairman of the convention of high school principals.
(6) Other official activities.

VISITS, CONFERENCES AND ADDRESSES.

The Commissioner's activities in discharging the duty of visiting schools may be summarized as follows:

Number of teachers' and trustees' institutes attended	28
Number of addresses given at institutes	55
Number of high school commencement addresses given	24
Number of teachers' conventions attended	11
Number of addresses given at teachers' conventions	19
Number of visits to high schools	113
Number of visits to state normal schools	9
Number of visits to universities and colleges	14
Number of visits to other schools	16
Number of addresses given at mass meetings and club meetings	52

Conferences have been held practically every day with superintendents, principals, high school trustees, university professors, normal school presidents, principals of private schools and others interested in secondary education.

INVESTIGATIONS.

Among the more important investigations made by this office were the following:

(1) An investigation of the teaching of stenography in the various high schools of the state, the various systems taught, the number of

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schools teaching each system and the number of pupils studying each system.

(2) An investigation of the organization of "junior college" departments in the high schools of California. (See page 159.)

(3) An investigation of the salaries paid to principals of high schools, and minimum and maximum salaries paid to high school teachers.

(4) An investigation of the tenure of teachers and principals of high schools enrolling less than fifty pupils. (See page 180.)

(5) An investigation of the rate of tax for high school purposes levied in each high school district in which less than fifty pupils are enrolled.

(6) An investigation of the cost of maintenance in the various high school districts of the state during the year ending June 30, 1914, the taxes levied for high school purposes, the assessed valuation of the various high school districts and the probable effect of the county high school fund bill (section 1764 of the Political Code) on high school district tax rates.

This investigation covered a period of two months and information concerning the effect of the bill on their districts or counties was sent to the members of the senate and assembly and to the various county superintendents.

(7) Preparation of a digest of the provisions of various city charters of California concerning the organization of the department of education in these cities.

(8) Preparation of a digest of the laws of the various states relating to the making of courses of study for high schools, or the approval thereof by the State Board of Education. This investigation was made at the request of members of the legislature.

(9) An investigation showing the effect of the abolition of the poll tax on revenues of the common schools of each county and a study of revenues and expenditures for school purposes in other states.

(10) Preparation of a digest of opinions of leading educators of the state concerning proper standards for special certificates of secondary grade.

(11) An investigation of the problem of furnishing textbooks free to the pupils of the high schools of the state, the advisability of adopting a uniform series of textbooks for high schools and publishing this series of textbooks at the state printing office. The results of this investigation were presented to the special committee of the legislature appointed to investigate this problem.

(12) An investigation of the enrollment, qualifications of teachers and courses of study in intermediate schools. (See page 166.)

(13) An investigation of the organization, management and use of high school libraries in California. (See page 175.)

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(14) An investigation of expenditures by each high school district during each of the two years covered by this report, the cost per pupil for maintenance, the tax rate for high school purposes and the effect of the county high school fund bill on high school tax rates. (See pages 191–196.)

(15) Preparation from original sources of a history of school revenues and expenditures in California since 1850. The results of this investigation are given in about 100 pages of typewritten matter and will soon be ready for publication.

(16) An investigation of the problem of supervised study and the various plans of supervision of study in California high schools. (See page 174.)

RECOMMENDATIONS CONCERNING COURSES OF STUDY.

This office has made an investigation of courses of study in the various high schools of California, the number of courses offered in each school, the number of pupils taught in each course, requirements for graduation and principles underlying the organization of high school courses of study. (See page 154.)

ENFORCEMENT OF HIGH SCHOOL TEXTBOOK LAW.

During the period covered in this report, the law relating to the adoption and use of high school textbooks has been consistently enforced.

In accordance with section 1743*a* of the Political Code enacted at the last session of the legislature, the Commissioner has required of each high school principal a full and complete report of textbooks in use during the month of October of each year. These reports have been checked with previous reports and the Commissioner is pleased to state that few cases of violation of the law have been noted. An investigation of these cases has, in each instance, revealed a misunderstanding of the law rather than an intention to disobey it.

This office has also required of the clerk of each high school board a certified list of textbooks adopted by the board during the previous year. This list is compared with the list submitted by the principal and any discrepancy is investigated.

In accordance with the provisions of section 1750 of the Political Code the official list of high school textbooks prescribed by the State Board of Education has been prepared and published at the beginning of each year. It should be noted that whereas the official list in force at the time the present State Board of Education assumed office contained 1196 titles, the official list for 1915–16 contains only 369 titles in 63 different subjects, an average of less than six for each subject. The list has been reduced by striking therefrom any book not used in at least five high schools after it has been listed for a period of two years.

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In 1915-1916 expert readers upon whose recommendation new books are listed were as follows:

List of Expert Readers, 1915-1916.

English: Fannie W. McLean, Berkeley High School; A. J. Cloud, deputy superintendent of schools, San Francisco.

History—Civics—Economics: J. R. Sutton, Oakland High School; John Nowell, Fresno High School.

Biology—Physiology: Chas. S. Morris, Palo Alto High School; Elizabeth D. Palmer, Los Angeles High School.

German: Elsie Wartenweiler, Berkeley High School; Laura Freidrich, Pomona High School.

French: Josephine Ginaca, Los Angeles High School; Emma Garretson, Alameda High School.

Commercial Subjects: B. F. Allison, Technical High School, Oakland; E. W. Barnhart, High School, Berkeley.

Mathematics: A. C. Olney, superintendent of schools, Santa Barbara; E. E. Brownell, Gilroy High School.

Physics—Chemistry: W. H. Williams, Fremont High School, Oakland; Anthony Rose, Modoc Union High School, Alturas.

Latin—Greek: Kate Herrick, Sacramento High School; F. O. Mower, Madera High School.

Spanish: Ruth Henry, State Normal School, Los Angeles; Marie Lopez, Los Angeles High School.

Physical Geography—Geology—Astronomy: Abner Downey, Selma High School; C. K. Studley, State Normal School, Chico.

Agriculture: J. B. Corcoran, High School, Wasco; H. F. Tout, High School, Visalia.

Music: Gertrude B. Parsons, Polytechnic High School, Los Angeles; Mary F. McDermott, supervisor of music, Alameda.

Domestic Science—Household Arts: Louise K. Willett, Sacramento High School; Maud Murchie, State Normal School, San Jose.

Manual Training—Technical and Industrial Arts: Elmer H. Whittaker, High School, Santa Barbara; Frank K. Barthel, supervisor manual training, San Francisco.

OTHER OFFICIAL ACTIVITIES.

Among the more important official activities other than those noted above are the following:

(1) Preparation and publication of a digest of all bills relating to schools introduced at the session of the legislature in 1915.

(2) Preparation and publication of forms for the Principals' October Report, and Clerks' Report of Textbook Adoptions.

(3) Preparation of a statement of progress in secondary education in California in 1914-1915, for the United States Bureau of Education.

(4) Conferences with Mr. Arthur P. Will, chief of the Legislative Counsel Bureau, concerning the proposed codification of the school law.

(5) Preparation of contracts with publishers for the lease of plates of books adopted for use in the elementary schools.

(6) Investigation of the merits of textbooks in elementary history of the United States, submitted by publishers in response to a call for bids published by the State Board of Education.

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(7) Preparation of suggestions for the revision of Mace's "Beginners History of the United States" adopted for use in the elementary schools.

(8) Investigation of the merits of manuscripts in California history submitted for adoption, editing the manuscript submitted by Percy F. Valentine, and supervising the publication thereof.

(9) Co-operation with the Committees on Education in senate and assembly in considering the merits of bills relating to education.

(10) Conduct of one examination each year for the State Board High School Credential and supervision of the preparation of questions and the grading of papers.

(11) Publication of the following bulletins:

Bulletin 6—Descriptive List of Text and Reference Books in Physics and Chemistry (out of print).
Bulletin 7—Co-operation in the Teaching of English.
Bulletin 8—Oral English in the High School.
Bulletin 9—New Laws Relating to High and Intermediate Schools.

THE FIRST ANNUAL CONVENTION OF HIGH SCHOOL PRINCIPALS.

Representatives present.

The first annual convention of high school principals was held at Fresno, December 20, 21 and 22, 1916, in accordance with a call issued by the State Board of Education as provided in section 1752 of the Political Code. Practically all of the principals of California high schools were present. Representatives were present also from the departments of education at the University of California, Leland Stanford Junior University and Pomona College. The principals of several private secondary schools and a considerable number of vice principals and teachers in the public high schools were in attendance.

Spirit of the convention; Publication of proceedings.

In several respects, the convention was remarkable. It was stated generally by those present that it was the most earnest convention they had ever attended. Every speaker was carefully prepared and presented his topic with intelligence growing out of thorough investigation. It is a matter of regret that all of the papers presented could not be published in a volume of proceedings and distributed among the high schools of the state. It was impossible to grasp all that was said during the convention, although every address was worthy of careful study. The Commissioner therefore recommends that the State Board of Education make provision in its estimate of expenses for the publication of one thousand copies of the proceedings of each convention. The cost thereof would not exceed $150 each year but the effect on the work of the high schools would be worth many times that amount.

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Recommendations of the convention.

The chief recommendations of the principals' convention were as follows:

(1) That the State Board of Education maintain the policy of holding one state convention rather than four district conventions of high school principals.

(2) That the school laws of the state be codified.

(3) That legislation be enacted making all high school certificates granted to inexperienced candidates probationary for the first two years of service.

(4) That the University of California be petitioned to establish a higher professional degree in education.

(5) That a practice school for teachers-in-training be established by the University of California.

(6) That high school library funds be expended by high school boards directly in building up high school libraries.

(7) That a plan of visual education for the entire state be provided.

The convention also indorsed the Smith-Hughes bill pending in congress, which provides federal aid for vocational education.

It expressed unqualified opposition to the plan of adopting a uniform series of textbooks for high schools of the state.

In a vigorously worded resolution, the convention condemned high school fraternities and called upon school administrators and all law-abiding citizens to aid in the suppression of these unlawful organizations.

FREE TEXTBOOKS FOR HIGH SCHOOL PUPILS.

The special committee appointed by the legislature for the investigation of the advisability of furnishing high school textbooks free and the feasibility of adopting a uniform series of textbooks for the high schools of the state to be published at the state printing office, will make its report at the coming session of the legislature. The report of this committee will undoubtedly contain much information, as well as certain definite recommendations.

However, the issues involved are so vital to education that the Commissioner feels the necessity of presenting the views he holds concerning some of these matters.

Free textbooks recommended.

The growth of enrollment in the high schools of the state during recent years indicates that the people of California regard the high school as an integral and indispensable division of the system of common schools. Approximately 90 per cent of the graduates from the elementary schools enter the high schools and an increasing proportion of pupils remain to finish the high school course. The logic of the

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situation demands that the principle of free textbooks now recognized in the elementary schools be extended to the high schools of the state. The Commissioner therefore recommends the enactment of necessary legislative measures for providing textbooks free to the pupils of all high schools in California.

Shall books be furnished by the district or the state?

In furnishing textbooks free to pupils in the elementary schools, the state has already assumed a heavy financial burden. The amount expended by the state for elementary school books during the year ending June 30, 1916, was $105,444.85. There are many who doubt the advisability of relieving the school district from all financial responsibility for furnishing textbooks to its pupils. Since the state has been generous in providing textbooks free for pupils of the elementary school, it is most reasonable that the district, rather than the state, should bear the expense of free textbooks for pupils of the high school.

Cost of textbooks under the proposed plan.

If textbooks are furnished free to the pupils by the districts each high school board will be able to avail itself of the 40 per cent discount generally allowed by publishers where books formerly used are offered in exchange, and the 25 per cent discount generally allowed on books for which no exchange is offered. Conservatively estimated the amount saved to the people of California annually through discounts would be $60,000. Under a free textbook plan it is probable that the total cost of textbooks for high school pupils will be approximately 50 per cent of the cost under the present plan.

Standardization and uniformity.

The plan of state uniformity of high school textbooks presents very serious objections from an educational viewpoint. Uniformity has been urged on the ground that standardization of textbooks is needed. The advocates of uniformity cite the successful application of the principle of standardization in business offices, factories, the trades and the transportation service, as indicative of the high value of standardization in educational processes. However, an analysis of their position reveals many fallacies.

The advocates of state uniformity of textbooks fail to recognize a distinction between uniformity and standardization. The terms are by no means synonymous. For example, if a factory standardizes its bolts, it does not necessarily make all bolts of the same size or shape or of the same kind of metal. If a business office standardizes its letters, it does not send out the same form to all inquirers. Standardization does not reduce all products to an absolute sameness as to form or substance. It will be seen, then, that the aim in standardization is not, and in the nature of things can not be absolute uniformity.

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Limits of standardization.

In applying the principle of standardization, efficiency experts recognize certain definite limits. For the most part, the principle of standardization is applied to *lifeless* things—to freight cars, engines, automobile tires, bolts, rivets, etc. Whenever the principle is applied to a living thing the application is not made until the thing has reached the limit of growth. Oranges are not standardized until they are ripe and hams are not standardized until the swine have been killed. It is very difficult to apply the principle of standardization to any growing thing without injury.

The high school a growing institution.

The advocates of rigid standardization must therefore assume that the high school is a mature institution. A study of its growth in California since 1900 shows that they are wrong in this assumption. In number of pupils, the high schools of the state are growing by leaps and bounds. In subjects offered, courses of study are changing rapidly to meet current social demands. The high schools are offering three times as many courses as were offered in 1900. In the number of pupils electing the various courses, there have been great changes in recent years. Fewer pupils in proportion to the total enrollment elect Latin, mathematics and some of the modern languages for example. In the selection and organization of subject matter in textbooks changes and improvements are constantly being made. In methods of approach in many of the subjects there have been almost revolutionary changes and these changes are still in progress. All of these adjustments have been made in response to a persistent popular demand that high school education must be made more efficient. It will be seen then that the high school is a living, growing, adjusting organism, not a mature institution. Since it is living, growing and adjusting itself, the high school can not be rigidly standardized without working injury to the institution, to its pupils and to society which it serves.

Selection of teacher and textbook a local problem.

The textbook and the teacher are two of the most important agencies for acquainting the pupil with the world's knowledge and experience. They determine very largely what and how the pupil shall learn in the high school. We have standardized the qualifications of teachers, but it must be observed that teachers are not uniform, nor is it desirable that they should be. Experience demonstrates clearly that a teacher who fits in one school or community may not fit in another school or community. She may not have the knowledge or experience or method of approach to the subject that the school needs and demands. In the textbook situation the same principle applies. A textbook is merely a body of knowledge written by a teacher who reflects his personality in his book and employs a certain method of approach. The same principle under which a community is permitted to select high school

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teachers adapted to that community applies in the selection of high school textbooks. The people of a community have the right, within reasonable limits, to determine what knowledge shall be taught in their high school and what method of approach shall be adopted. State uniformity of high school textbooks would deny the community the right to adapt the school to local conditions and needs. The Commissioner is strongly of the opinion, therefore, that the principle of state uniformity should not be embodied in the measure providing free textbooks for the pupils of the high schools. He believes that the present law providing that the districts must adopt high school textbooks from a standard list prescribed by the State Board of Education meets every reasonable need for standardization.

THE TRAINING OF HIGH SCHOOL TEACHERS.

The standard for the high school certificate established by the State Board of Education in accordance with law is graduation from a four-year college course preceded by a four-year high school course, and a year of advanced study subsequent to graduation from college. During his undergraduate and postgraduate courses the candidate must complete fifteen units of work in the Department of Education including certain prescribed courses. However, a candidate who has had twenty months of successful experience in teaching may substitute such experience for half of the postgraduate requirement including all the work in education.

Certain graduate schools in the United States are authorized by the State Board of Education to issue credentials which may be recognized for high school certification in California, but all candidates for such credentials must meet all the requirements outlined above. All credentials issued by institutions outside the state must be approved by the Commissioner of Secondary Schools.

During the biennial period covered by this report no change in the list of accredited graduate schools has been made.

Credentials issued.

The following table shows the number of high school credentials issued by the State Board of Education and accredited graduate schools during the biennial period:

Agency issuing credential	Number issued	
	1914-1915	1915-1916
State Board of Education	180	244
University of California	217	236
Leland Stanford Junior University	77	89
University of Southern California	91	112
Institutions outside the state	*50	*50
Totals	615	731

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University training high school.

In his report for 1914 the Commissioner pointed out the need for better facilities for practice teaching in institutions in this state authorized to recommend candidates for the high school certificate. A bill providing for the organization of a training high school at the University of California was introduced at the last session of the legislature but it failed of passage. Fortunately the university was able to establish co-operative relations with the Board of Education of the city of Oakland.

In 1914 the Board of Education of Oakland placed the old Emerson School building at the disposal of the university and organized an intermediate and high school for the purpose of providing practice teaching facilities for prospective high school teachers, agreeing to bear a reasonable part of the cost of maintenance. The school enrollment includes pupils from Oakland and Berkeley. An excellent faculty was selected and Professor C. E. Rugh was assigned to direct the school. In the year following Mr. Herbert Lee was employed as principal.

The University High School is a model six-year high school, the work beginning with the seventh year. In 1915–1916 the number of pupils enrolled in the ninth, tenth and eleventh years was 169. The enrollment in the seventh and eighth years was 150. Practice teaching opportunities are provided for 150 students in education at the university, consequently there are few prospective teachers doing their practice teaching in other schools.

The establishment of the University High School has already resulted in advancing the standards of teaching in the state. The continuance of the school is essential if the high schools are to have properly equipped beginners in teaching. In the near future, the state should make ample provision for maintenance and should build and equip a suitable building for a model training high school.

Practice teaching facilities at Stanford University.

At Stanford University the outlook for better practice teaching facilities is very favorable. On June 19, 1916, a union of Palo Alto, Mayfield and Stanford districts was formed for the maintenance of a high school. Through the generosity of the trustees of Stanford University, a site of twenty or thirty acres adjoining the university campus has been provided at a rental of one dollar per annum for 99 years, and the new high school building will probably be erected on this site.

Although no definite arrangement regarding practice teaching has been worked out the Commissioner is very hopeful that the university and high school, cooperating in ways that will be mutually helpful, will arrange for practice teaching in the new school which will be near the university.

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Practice teaching facilities at University of Southern California.

At the University of Southern California the academy is available for practice teaching. This arrangement seems to be very satisfactory to the university authorities.

The School of Education.

In 1914 the School of Education was organized at the University of California. In organizing this school the state university has placed the profession of teaching on the same basis as the professions of law and medicine. The purposes of the school are (1) to offer courses of professional training for candidates for the high school certificate; (2) to offer advanced courses for school administrators and supervisors; (3) to encourage advanced research in education; and (4) to afford students who do not look forward to teaching, opportunity for becoming acquainted with educational theories and problems.

The Board of Regents of the University of California has also authorized the conferring of a higher degree for advanced research in education. It is the purpose of the School of Education to interest the teacher in the scientific investigation of special educational problems of his community, as well as general educational problems. Community surveys will be encouraged. In fact, the School of Education has opportunity to assume a relation to the educational interests of California similar to that of the College of Agriculture to the agricultural interests of the state. The influence of the school is already felt in the California school system.

The Department of Education at Stanford University has also shown a fine spirit in co-operating with the Commissioner and the State Board of Education. The research work of this department, touching elementary as well as secondary school problems, has been enlightening and helpful. Some of this work has attracted nation-wide notice. California has reason to be proud of the work of the faculty in education in each of its accredited graduate schools.

PROBLEMS OF THE COURSE OF STUDY.

The situation in California.

No problem of high school administration is more important than that of curriculum construction. Notwithstanding its importance this problem has been crowded into the background by other problems attendant upon the remarkable growth of high schools during the last twenty-five years. An analysis of the courses of study submitted to the State Board of Education for approval shows that there are few, if any, principles of curriculum construction generally accepted by those who make the courses of study for California high schools. A few high schools still cling to the single rigid curriculum. For the most part these schools have a small enrollment. Many high schools report

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an elective system that is practically unlimited. Most of the high schools, however, are making serious efforts to arrange courses of study on the basis of the needs and interests of pupil-groups.

Need for more definite requirements.

Signs multiply that both the "single-track" curriculum and the "trackless" or purely elective system, have had their day. High school administrators are coming to realize that while the modern curriculum must make allowance for the varying needs, interests and futures of pupils, it must be so constructed that whichever course the pupil may elect, he will find therein an arrangement of studies that is purposeful and of genuine educational value. A diploma of graduation from high school must be a guarantee of something other than the fact that the pupil has spent four years in high school and made a passing mark in fifteen or sixteen units of work.

Suggestions for solution of problem.

In attempting to derive and formulate general principles which may be applied in the construction of curricula, the Commissioner of Secondary Schools realizes the danger of adding to the confusion by offering a ready-made plan. A problem of such great moment can not be solved by an utterance *ex cathedra*. In studying suggestions for the solution of the problem offered by the best educational authorities one is impressed with the lack of unanimity. The best solution of the problem will be found after careful investigation and full discussion by those who are concerned with curriculum construction. The Commissioner has therefore appointed a committee from the high school principals of the state to cooperate with him in the investigation, and this committee will report to the High School Principals' Convention.

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Data concerning courses of study.

The following data concerning courses of study and enrollment therein has been compiled in the Commissioner's office:

	Number of schools
English—	
4-year course	230
3-year course	6
2-year course	6
1-year and special courses	18
Journalism	15
Oral English	33
Debate	29
Dramatics	14
Latin—	
4-year course	152
3-year course	11
2-year course	71
1-year course	1
Greek—	
3-year course	6
2-year course	4
French—	
4-year course	19
3-year course	10
2-year course	39
1-year course	3
German—	
4-year course	44
3-year course	20
2-year course	124
1-year course	3
Spanish—	
4-year course	28
3-year course	16
2-year course	96
1-year course	8
Mathematics—	
Elementary algebra	245
Plane geometry	245
Advanced algebra	221
Solid geometry	209
Trigonometry	197
Surveying	15
History—	
Ancient	223
Medieval and modern	215
American history and civics	257
English	135
General	15
Industrial	17
Economics	81
Sociology	6
Current	4
Pacific coast	1
Science—	
General	142
Physical geography	78
Chemistry	238
Physics	231
Physiology	35
Hygiene	15
Botany	80

	Number of schools
Science (continued)—	
Zoology	19
Household chemistry	23
Agricultural chemistry	6
Biology	52
Astronomy	2
Psychology	1
Domestic science—	
Cooking	192
Sewing	204
Millinery	31
Home economics	85
Nursing	11
Dietetics	7
Commercial—	
Bookkeeping	218
Shorthand	204
Typewriting	210
English	58
Spelling	97
Correspondence	39
Law	149
Geography	102
Arithmetic	192
History	16
Penmanship	144
Banking	7
Business practice	34
Advertising and salesmanship	4
Agriculture—	
General agriculture	73
Animal husbandry	28
Horticulture	30
Dairying	23
Gardening	13
Plant propagation	15
Soils	15
Farm management	9
Farm mechanics	16
Drawing—	
Freehand	193
Mechanical	143
Geometrical	54
Architectural	1
Painting	3
Arts and crafts	31
Clay modeling	7
Physical education	52
Manual training	185
Music	128
Assaying	4
Library training (vocational)	3
Electricity	10
Mineralogy and geology	2
Architecture	3
Printing and bookbinding	8
Auto mechanics	12

Data for 1915-1916. Included in investigation are courses of study in 260 high schools.

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Table Showing Number of Pupils Enrolled in Various Courses, October 1, 1915.

	Number of pupils enrolled
English--	
Grammar	4,111
Composition-rhetoric	25,643
Myths	11,649
Heroic ballads	9,444
History of English literature	5,465
History of American literature	1,530
Oral English and debate	4,639
Oration and argument	3,381
English poetry	15,031
English prose	3,555
Dramatics	15
Journalism	68
Elocution	271
Latin—	
First year	8,493
Second year	5,016
Third year	1,081
Fourth year	715
Greek—	
First year	63
Second year	52
Third year	22
French—	
All classes	2,990
German--	
All classes	6,680
Spanish—	
All classes	10,844
History—	
Ancient	8,886
Medieval and modern	6,339
English	2,382
American	8,432
General	307
Industrial	420
Civics	5,250
Economics	1,579
Sociology	85
Current	22
Commercial--	
Bookkeeping	8,194
Shorthand	6,302
Commercial (continued)—	
Spelling	4,990
Law	1,374
Geography	799
Correspondence	3,663
Arithmetic	6,303
Accounting	425
Banking	292
Business practice	481
Penmanship	3,981
Typewriting	6,772
Salesmanship	85
Advertising	76
Music—	
All classes	4,915
History of art	480
Mathematics—	
Algebra (First Year)	17,208
Algebra (Advanced)	2,738
Geometry (Plane)	10,724
Geometry (Solid)	1,545
Trigonometry	1,032
Calculus	10
Higher arithmetic	104
Mechanics	186
Science—	
Physics	4,178
Chemistry	6,814
Physical geography	2,022
Biology	1,390
Zoology	385
Physiology	1,232
Botany	1,712
Mineralogy	11
Geology	125
Astronomy	85
General	3,501
Psychology	52
Domestic science	2,952
Household arts	1,588
Agriculture	1,289
Assaying and cyanide	10

Data compiled from principals' October reports for 1915.

Suggested basis of organization.

Without attempting to anticipate the report of the principals' committee, the Commissioner offers the following suggestions for discussion:

1. The minimum requirement for graduation from a California high school shall be sixteen units.

2. Eight units shall be prescribed in English, foreign languages, mathematics, history and economics and natural science, including a minimum of 2 units of English, 1 unit of American history and civics and 1 unit of science.

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3. The remaining eight units shall be elective, but the pupil must so elect his studies that he will have a three-unit course in each of two departments and a two-unit course in at least one other department.

The possibilities of the plan are indicated in the following arrangement of minimum courses under the proposed plan:

Subject	Course I	Course II	Course III	Course IV	Course V	Course VI	Course VII	Course VIII	Course IX
English	2	2	2	2	2	2	3	4	4
Mathematics[1]	2	0	2	1	1	1	1	1	0
Foreign Language	2	2	0	2	2	0	2	0	2
History and Economics[2]	1	2	2	1	2	3	1	2	1
Natural Science[3]	1	2	2	2	1	2	1	1	1
Elective	8	8	8	8	8	8	8	8	8
Total	16	16	16	16	16	16	16	16	16

[1]In courses IV–IX, inclusive, work in commercial or household arithmetic may be accepted as meeting the requirement in mathematics.

[2]In all courses English (2 units), American History and Civics (1 unit) and Science (1 unit) shall be prescribed. In all courses except I. IV, VII, and IX economic geography may be offered for one unit of the requirement in history and economics.

[3]In course I the science offered must be a laboratory science taken in the third or fourth year.

THE JUNIOR COLLEGE.

Growth of the junior college.

During the biennial period the progress of the junior college in California has been very satisfactory. All of the junior colleges listed by the Commissioner of Secondary Schools in his report for the year ending June 30, 1914, with the single exception of Le Grande, show substantial growth. To this list should be added the following high schools which have established junior college departments: San Diego, Santa Ana, Pomona, Azusa, Chaffey Union (Ontario), San Luis Obispo, Riverside and Sacramento. Movements are under way having for their purpose the establishment of junior college departments at Shasta Union High School and Palo Alto High School.

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Enrollment in junior colleges.

The following table shows the enrollment in the junior college departments of the various high schools for the year ending June 30, 1916:

Enrollment in Postgraduate Courses in California High Schools. 1915-1916.

High School	First year		Second year		Totals
	Men	Women	Men	Women	
Concord*		2			2
Fresno	49	38	14	6	107
Imperial	1	4	1	2	8
Bakersfield	14	5	3	1	23
Azusa	7	30			37
Long Beach	20	59			79
Hollywood	25	60	5	12	102
Los Angeles city	188	175	42	36	441
San Fernando	4	3			7
Pasadena	8	53			61
Le Grande*		1			1
Fullerton	12	15	10	7	44
Orange	4	3			7
Santa Ana	7	19			26
Lincoln*		3			3
Auburn	8	5	5	2	20
San Diego	29	44	4	7	84
Santa Barbara	15	15	6	11	47
Yreka	1	15	1		17
Orosi*	1	1			2
Totals	393	550	91	84	1,118

*No regularly organized junior college courses maintained.

Cost of instruction in junior colleges.

Unfortunately the cost of maintenance of the junior college is not segregated from the cost of maintenance of the high school itself. It is impossible, therefore, to secure exact data showing the cost of maintenance. Through the courtesy of various high school principals, however, approximate data has been secured. Principal Arthur Gould of San Diego has submitted the following table showing the cost per student per semester for instruction and equipment in the various classes of the junior college department of the San Diego High School:

Subject	Cost per student
Mathematics	$17 02
History	9 79
Economics	9 11
English	16 40
French	12 19
German	11 08
Chemistry	30 46

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In speaking of the total cost per student, he says, "It is very evident that the instruction per class is high priced, while in several classes the enrollment is quite small."

Mr. Delbert Brunton, formerly principal of Fullerton Union High School, estimates the total cost of salaries and equipment in the junior college department at $5,970 per annum. Assuming an average daily attendance of fifty the cost per student would be approximately $120 per annum. The cost per pupil in the high school department during the preceding year was $235. He states that if the proportionate share of overhead expense be added to the cost of instruction and maintenance in the junior college department, the cost per student will not exceed the cost per pupil in the high school.

Assistant Superintendent Monlux of Los Angeles estimates the cost per student in the junior colleges of that city at $150. The cost per pupil in the high schools for the year 1914–15 was reported at $128.50.

Superintendent A. C. Olney of Santa Barbara reports as follows:

"For the first two years the cost was about $50 for each student. The cost per pupil in the regular high school was, last year, $91.34."

Dr. John F. Engle of Placer Union High School at Auburn writes as follows:

"As to the cost per capita, I figure it in the following way: If a teacher is teaching five courses, two of which are in the junior college, I charge up two-fifths of this salary to the junior college. On this basis the entire amount of money now spent in our school for teaching junior college subjects is $3,345, which, divided by 20 (enrollment), equals $167.25. With the present teaching force we could easily handle 40 junior college students. This would make the per capita cost approximately $80. It is entirely safe to say that when the junior colleges are fully developed, the teaching cost per capita, barring the expense of installing laboratories, will not be a cent higher than the per capita cost for high school pupils."

From the data supplied by the principals it would seem reasonable to conclude that the cost per student in the junior college is little if any greater than in the high school. It must be borne in mind, however, that the only courses offered at present are those "approximating the first two years of college work." If vocational courses are offered, and it is desirable that they should be, the cost per student will undoubtedly be larger than the cost per pupil in the high school.

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Cost of equipment.

The following estimate of the minimum cost of equipment in small junior colleges has been submitted by Dr. John F. Engle of Placer Union High School:

Course	Cost of equipment
Elementary analysis	nominal
Analytic geometry	nominal
Calculus	nominal
Western American history	$100– $200 (books)
Nineteenth century European history	100 (books)
First and second year college English	50– 150 (books)
Political economy	50– 100 (books)
First year college chemistry	500– 800 (laboratory)
Second year college chemistry	nothing additional
College physics	1,400– 2,000
Logic	50 (books)
Latin	20 (books)
French	20 (books)
German	20 (books)
Spanish	20 (books)
Psychology	25– 50 (books)

This estimate is based on the assumption that the library and laboratories have been well equipped previously for high school work.

Organization on the hour-recitation basis.

In an excellent bulletin on the junior college issued by the University of California, it is suggested that the junior colleges should organize recitations on a full hour basis. "University experience shows that an hour is none too long for the proper development of the theme of lecture and recitation." Moreover, the change to the hour schedule "begins the transition from the school attitude to the college attitude."

Principal Engle of Placer Union High School reports that he has reorganized the entire school on the hour recitation basis. In his report Dr. Engle gives his estimate of the hour schedule as follows: "The best scheme for grafting the junior college on the high school is the hour schedule, the one that goes along with the supervised study scheme. With the hour period, the high school can at once adopt supervised study and the junior college can immediately parallel the two-hour, three-hour and five-hour courses at the University. There are some practical difficulties in adjusting a schedule where the high school periods are only forty or forty-five minutes long so far as the junior college is concerned."

The office of dean.

The organization and administration of the junior college involves much extra work for the principal. If the junior college department is to be successful it is essential that some member of the faculty be charged with immediate responsibility for its organization, and that this officer make a careful and critical study of the specific problems

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of the department. In the smaller junior colleges the principal may assume these duties but in the larger junior colleges it is desirable that a dean of the junior college be appointed. He should rank as a vice principal and should be responsible to the principal directly for the conduct of work in his department.

Present legal provision concerning the junior college.

The law under which junior college departments have been organized was approved in 1907. This law is somewhat vague and indefinite and there is need for amendment at the approaching session of the legislature. The law authorizes high school boards to establish postgraduate courses of study approximating the first two years of college work. It provides that graduates of the high school maintaining postgraduate courses and graduates of other high schools may be admitted to such courses. It also authorizes the high school board to charge tutition for pupils living without the district and attending such courses.

Financing the junior college.

It will be observed that no specific provision for maintenance is made in the law. Practically all of the districts which have established postgraduate courses have raised the expense of maintenance by district taxation. In 1915, the Attorney General gave an opinion that students enrolled in such courses can not be counted in making apportionments of the state high school fund. There seems to be some doubt also as to the legality of counting postgraduate students in estimating the amount of county high school fund required.

The time has arrived when the postgraduate or junior college department should be placed upon a more satisfactory financial basis. A more comprehensive law concerning the organization of postgraduate courses should be placed upon the statute books and this law should contain the provision that the average daily attendance of students enrolled in such courses shall be counted in estimating the amount of state and county high school revenues. Apportionments should be made on account of attendance on postgraduate courses in the same manner as apportionments are made on account of attendance on regular high school courses.

Provision should be made also that wherever students residing in a county where junior college privileges are not provided attend postgraduate courses maintained in a school of an adjoining county, the attendance of such pupils shall be reported to the county superintendent of schools of the county in which such students reside, and the county superintendent shall include in the estimate of county high school fund required an amount computed at $60 for each student so attending. This amount should be transferred to the credit of the

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school in which the students are enrolled. If such provision is made, the clause relating to the payment of tuition should be stricken out. The junior college is a part of our public school system and tuition therein should be free.

Limitation on organization.

In making provision for state and county contributions to the support of postgraduate or junior college courses, we should guard against the organization of such courses in districts which can not adequately support them. The first duty of a community in educational affairs is to provide adequately for the support of its elementary schools. Its next duty is to provide adequately for the support of its high school. Until the elementary and high schools are adequately provided for, a postgraduate or junior college course should not be established. The establishment of weak junior college departments will hinder the development of the junior college movement and will work injury to the elementary and high schools. After investigation, the Commissioner recommends that the law provide that a postgraduate course shall not be established in any high school district having an assessed valuation, exclusive of operative property, of less than $7,500,000. It should also be provided that no postgraduate course shall be established unless at least fifteen qualified students apply therefor. The law should contain a provision that whenever the average daily attendance in the postgraduate department for any school year is less than ten, the postgraduate department shall be suspended and shall not be re-established until at least fifteen postgraduate students petition for such re-establishment.

Course of study.

Under provisions of the law, the courses of study in the junior college department must approximate those offered in the first two years at the university. This limitation should be removed so that the junior college department may become a self-directing institution, free to adapt itself to community needs. It is well, perhaps, that the junior college department, in its infancy, was under college tutelage, but the time for limitation of the work of the junior college has passed. There is need in various communities in the state for postgraduate courses of a vocational nature, including courses designed to fit students for civic occupations as advocated by Dean Alexis F. Lange of the School of Education at the University of California. In certain communities the junior college may offer courses in higher commercial law, business management, accounting, banking and finance. There is need also for the introduction of the study of Spanish and of Spanish-American history, customs and institutions, with a view to fit young men for

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commerce and trade in Spanish-American countries. For such students the study of literary Spanish is of doubtful worth.

In certain communities the junior college should offer courses in practical engineering—civil, structural, mechanical and electrical. They should give courses in plane surveying, strength of materials, hydraulics, architecture and bridge design. In other communities, advanced practical courses in agriculture may be offered. It is essential, therefore, that the law shall be so drafted that courses other than those approximating the first two years at the university may be offered.

Admission—special students.

It is impossible under the present law to admit to postgraduate courses any student other than a high school graduate. This limitation on admission is a serious handicap. The universities have found it advisable to admit to college work special students who have not fulfilled all the requirements for admission. Scholarship standards would be endangered, of course, if the doors of the junior college were thrown wide open, but this is not necessary. The law may safely provide that candidates for admission who are at least twenty-one years of age and who shall satisfy the principal and county superintendent of schools that they possess requisite ability and preparation, may be admitted to junior college courses, subject to such limitations with respect to amount of work and election of studies as the faculty or high school board may prescribe. In courses paralleling the first two years of college work, for example, it may be necessary, in the interest of high standards of work, to limit the number of special students admitted to such classes.

Pre-university students and students-at-large.

For the establishing of proper scholarship standards, it is very desirable that graduates of high schools admitted to the junior college be classified as pre-university students and students-at-large. A pre-university student is one who has satisfied the matriculation requirements established by the University of California. A student-at-large is one who has not satisfied these requirements. Provision should be made, however, for making up matriculation credits while the student is pursuing college courses. Full matriculation should be necessary for students desiring to earn recommendation for credit at the university. However, the determination of the status of high school graduates entering the junior college should be a matter of school regulation, not a subject for legislation.

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Graduates from postgraduate courses.

If the junior college is to attain full recognition as an educational institution, it is desirable that the requirements for graduation be standardized. A diploma from a California junior college should represent a minimum of higher educational work. While it would seem inadvisable to embody requirements for graduation in the law, provision may be made for the establishment of minimum requirements for graduation by the State Board of Education.

ORGANIZATION OF INTERMEDIATE SCHOOLS.

New law governing intermediate schools.

Although the intermediate school was established in California as early as 1909, it has only recently been given recognition in the laws of the state. The constitution of California provides for a distinct segregation of elementary and high school funds, so the problem of organizing the intermediate school, embracing two years of work formerly recognized as belonging to the elementary school, and one or two years of work recognized as belonging to the high school, was a difficult one to solve. However, the legislature of 1915 passed an act legalizing the organization of intermediate schools and removing, in a measure, the difficulty caused by the separation of elementary and high school funds. The intermediate schools are made a part of the secondary school system. A transfer of money from the elementary school fund to the secondary school fund to pay for the tuition of pupils enrolled in the first two years of the intermediate school course is provided for. The law also provides that a union high school district, by a majority vote of the qualified electors thereof, may organize intermediate school courses and admit thereto pupils who have completed the sixth grade.

Intermediate schools in rural communities.

Although several cities have reorganized their schools in accordance with the new law no union high school district has taken advantage of its provisions. The Commissioner believes that the intermediate school law offers to rural districts excellent opportunity for consolidating the upper grades of the grammar schools and introducing manual training, household arts, elementary agriculture and similar work. Since the high school board is authorized by law to provide transportation to and from the high school building for pupils residing at a distance, the problem of transportation may be easily solved. When the people of the more thickly populated union high school districts thoroughly understand the law providing for the organization of intermediate school courses and the educational advantages such courses offer, many such high school districts will undoubtedly introduce intermediate school courses.

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Table Showing Enrollment in Intermediate School Courses (1915-1916).

(Including elementary schools offering one or more high school subjects in the seventh and eighth grades.)

City	Number of intermediate schools	Enrollment
Los Angeles[1]	9	18,640
Berkeley	6	2,276
Palo Alto	1	286
Oakland[2]	9	2,566
Pomona	4	541
Alameda[2]	4	721
Sacramento[3]		1,974
Santa Monica[2]	2	353
Santa Rosa[1]	1	423
Santa Ana[2]	1	497
	37	28,277

[1]Enrollment given includes all pupils in city enrolled in seventh, eighth and ninth years of day schools.

[2]These schools embrace seventh and eighth years only. They are departmentally organized and offer one or more elective courses. In Oakland, however, two three-year intermediate schools are maintained.

[3]Sacramento has recently organized its entire system to include intermediate schools. Enrollment given includes all pupils enrolled last year in seventh, eighth and ninth years.

THE COURSE OF STUDY IN INTERMEDIATE SCHOOLS.

An analysis of the courses of study in the various intermediate schools reveals a remarkable similarity in their organization. In most intermediate schools the school day is divided into forty-minute periods. Fortunately the intermediate school has not adopted the plan generally accepted in California high schools whereby the pupil's course for any years is limited to four or five studies each of which must be taken five periods a week. The intermediate school recognizes in its course of study that one of its functions is to enable the pupil to discover himself and to this end it provides variety of work. In some quarters there is a tendency to regard the intermediate school as the high school pushed down to the beginning of the seventh year. An intermediate school organized in accordance with this notion is certain to fail. It is a mistake to teach Latin or English or any other subject in the intermediate school in the same way that the subject is taught in the high school. The content must be different, the methods must be different and the results must be different, because the pupils are different with respect to age, interest and capacity.

Significant changes in the course of study.

An analysis of the courses of study in the intermediate schools of California by the Commissioner of Secondary Schools was published in the Proceedings of the California High School Teachers' Association for 1914. Since the publication of the analysis, the most significant development in intermediate school courses is that of the Vocational

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intermediate school in Oakland. In this school the work of the seventh and eighth grades for girls includes the following: English, 5 periods; mathematics, 3 periods; history and geography (seventh year only), 4 periods; civics and hygiene (eighth year only), 4 periods; design, 4 periods; music, 2 periods; study of girls' vocations, 1 period; physical training, 1 period.

In addition to the subjects mentioned, seventh grade girls take cooking, 10 periods; dressmaking, 10 periods for first half year and millinery, 10 periods for second half year. Eighth grade girls take dressmaking or millinery for 20 or 25 periods.

In the ninth year the work for girls includes English, 5 periods; music, 2 periods; physical training, 2 periods; accounting, 3 periods; drawing and design, 4 periods; and trade work or home economics, 20 or 25 periods.

The course for seventh and eighth grade boys is as follows: English, including penmanship, spelling, grammar and composition, 5 periods; music, 2 periods; drawing, 4 periods; history-geography or civics-hygiene, 4 periods; arithmetic, 4 periods; physical training, 1 period; shop work, 20 or 25 periods.

In the ninth year the work for boys includes shop work, 20 or 25 periods; drawing, 4 periods; mathematics and science, 5 periods; English, 4 periods; physical training, 1 period; music, 2 periods; study and library, 4 periods.

The shopwork includes automobile construction and repair, blacksmithing, carpentry and cabinet making, electrical work, machine shopwork, printing. Machine drawing and architectural drawing are also given.

EVENING HIGH SCHOOLS.

The growth of evening high schools in California during the last two years has been remarkable. Formerly evening high schools were found only in the larger cities. The official reports of the county superintendents for the 1915–1916 show that evening high schools have been established in fourteen centers in California, several of which have a population of less than 10,000. This growth is due very largely to the growing disposition of boards of trustees to adjust the organization and courses of study of the high school to the needs of the community.

The county high school fund bill, enacted in 1915, has stimulated the organization of evening high schools in rural as well as in urban communities. The evening high school now receives from the state approximately $1,000 per annum on the school basis, and in addition thereto, $10 per pupil in average daily attendance. It receives from the county $125 per teacher (not exceeding four teachers), for each

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teacher actually employed in the evening high school, and in addition thereto approximately $50 per pupil in average daily attendance. The funds received from state and county are sufficient to pay all of the expenses of maintenance provided the average attendance in the evening high school exceeds twenty. In some instances the evening high school actually receives more money from state and county than is expended for the maintenance of the school. The Commissioner is therefore of the opinion that the law relating to the apportionment of the state high school fund should be so amended that the evening high school shall be considered a branch of the day high school.

The following table shows the enrollment and average daily attendance in the evening high schools of California in 1915–1916.

Table Showing Enrollment and Average Daily Attendance in Evening High Schools (1915-1916).

Name of school	Enrollment	Average daily attendance
Oakland High	1,206	113
Technical (Oakland)	93	6
Imperial	111	15
Los Angeles High	3,278	208
McKinley Avenue (Los Angeles)	1,216	100
Polytechnic (Los Angeles)	10,292	737
San Pedro (Los Angeles)	379	24
Wilmington (Los Angeles)	71	19
Pasadena	807	69
Pomona	590	38
Santa Monica	524	44
Venice	227	13
Sacramento	1,901	140
San Diego	1,917	218
Commercial (San Francisco)	1,504	195
Humboldt (San Francisco)	2,298	454
North Beach (San Francisco)	80	15
San Mateo	168	30
Gilroy	96	19
San Jose	646	266
Marysville	93	16
Totals	27,597	2,739

The Commissioner recommends that section 1619 of the Political Code be amended so as to eliminate the provision that all schools in a given district must be maintained for an equal length of time during the year, in so far as this section applies to evening schools. Since a large proportion of the enrollment in evening high schools is from the adult population of the community, the law should permit evening high schools to hold sessions two, three, four, five or six times a week, as the local board may determine. It is practically impossible for a school enrolling a large number of adults to insist upon attendance five evenings each week.

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HIGH SCHOOL EXTENSION.

In a report of this kind it is impossible to chronicle all of the significant developments in secondary education in California. However, certain recent developments are particularly deserving of comment.

We are coming to realize that in many communities the work of the high school must extend beyond the four walls of the classroom if the school is to minister to the educational needs of all the young people who are genuinely desirous of obtaining a high school education. The high school must extend its work into the community, not only for the sake of offering opportunity to young people who can not attend the regular session, but also for the purpose of drawing strength and life from the community itself.

Among the more significant attempts at high school extension are the following:

Correspondence courses.

In 1914 the trustees of Calaveras High School, located at San Andreas, adopted a plan of correspondence instruction. Calaveras High School District embraces the greater part of Calaveras County. Many of the young people in the district reside forty or fifty miles from the county seat where the high school building is located. On investigation it was found that there were many young people, who, for financial or other reasons, could not conveniently attend the high school. It was to meet the needs of these young people that a plan of correspondence instruction was inaugurated.

The correspondence courses are open to all individuals regardless of age or previous educational qualifications, except those boys and girls who are now attending grammar school. Most of the subjects offered in the high school may be taken by correspondence. High school credit is given for all satisfactory work done and no charge for tuition is made. The success of the work is tested by examination given by one of the instructors in person.

Principal James Keith reports that the average number of pupils enrolled each year in correspondence courses is eighteen. The highest number enrolled at any time was thirty and the lowest eleven. He states that the plan has aroused the ambition of a goodly number of boys and girls, many of whom have attended the high school after completing some work by correspondence. He states also that the high school has been brought in touch with families living in remote districts and the plan has made the people better acquainted with the workings of the high school. As a means of extending high school advantages in some of the sparsely settled districts of California this plan is worthy of mention.

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Summer high schools.

During the summer of 1916 the Los Angeles city department maintained summer courses in the Polytechnic and Los Angeles high school buildings. During previous summers courses have been maintained in other high school buildings. The purpose of these courses is to provide activities for the unoccupied time of city children, to enable pupils to make up back work, to strengthen the work of pupils who show weakness in any subject, and in some cases to enable ambitious pupils to take advanced work. The maximum enrollment during the summer was 1,959 pupils. The teachers were selected from the regular staff of teachers and the subjects given were those selected by the pupils themselves from the regular high school courses. No subject was offered unless the number of pupils electing it was sufficient to warrant the organization of a class. Mr. M. C. Bettinger, assistant superintendent, regards the summer high school session as most successful. He states that the summer high schools have "grasped the consciousness of the city," and believes that the public appreciates to the utmost the value of these summer sessions.

Boys' agricultural clubs.

During the last two years high school agricultural clubs organized by Mr. B. H. Crocheron of the University of California have made excellent progress. The first of these clubs was organized in 1913. In 1914–1915 there were 64 clubs, ranging from Arcata in Humboldt County to San Diego. Most of these clubs were located in the great interior valleys. There were 620 boys belonging to these clubs in 1914–1915 and the number enrolled in 1915–1916 was in excess of 1,000.

The boys' agricultural clubs are organized for the purpose of stimulating interest in farming and real appreciation of rural opportunities. The clubs are inspired by expert leaders and each member participates in club government. Each member is allowed to select a home project for the year. Some of the boys elect to raise pigs, others to plant an acre of potatoes or lima beans or popcorn. At the end of the season expert judges view the home projects and determine the success of each project. All of the successful boys assemble in October at the State University Farm at Davis where they become acquainted with some of the more scientific aspects of farming. Twenty-nine prize winners were accompanied by Mr. Crocheron on a trip across the continent for the purpose of visiting the best farm schools in the country and observing farming methods in other states. The work of the boys' agricultural clubs has been very successful. These clubs are giving the young people of rural districts a better outlook upon life and a better attitude toward community problems.

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In our larger high schools there is danger that the pupil will be lost in the maze of courses. The personal relation between pupil and pupil and between pupil and teacher in such schools is a problem worthy of careful study. In such schools it is quite desirable that at least two teachers, a man and a woman, be charged with the responsibility of looking after the affairs and activities of pupils. In some instances the teacher in charge of the affairs and activities of boys is designated "dean of boys" or "boys' adviser," and the teacher in charge of the affairs of girls, "dean of girls" or "girls' adviser." The adviser stands in a close personal relation to the pupils and must therefore have a personality commanding respect and inviting confidence. It is the business of the adviser to supervise the activities of the pupils and to assume considerable responsibility for the social aspects of high school work. Upon him rests the larger responsibility for making school activities serve educational and moral ends. It is his duty to stand for the best in high school life. The adviser is guardian of the moral welfare of the pupils assigned to him.

Miss May V. Haworth, girls' adviser in Alameda High School, states her conception of the aims of the adviser's office as follows: "Mentally—to hold a high intellectual standard, to teach part time in order to keep in touch with class problems, to encourage honor societies and help in vocational guidance; morally—to stimulate the discussion of pertinent questions which will lead to good school spirit and set proper standards for personal conduct; physically—to encourage outdoor sports, athletics for all pupils and hygiene talks or courses."

The adviser should personally interest himself in new pupils; should cooperate with parents, teachers and principal in stimulating good conduct, encouraging weak students and helping to follow up pupils who want to leave, or who have left school. The adviser has by nature of his position great opportunities by conferences and confidential talks to develop leaders and to bring out the shy or bashful pupils, to foster student-faculty co-operation, to stimulate work, play and service, and to emphasize character as the goal of education.

The Commissioner believes that in the larger high schools the work of the adviser is almost indispensable. He wishes to suggest, however, that the teacher assigned to this work be known as supervisor of boys' activities or supervisor of girls' activities. Strictly speaking the terms dean and adviser are applicable only to college officers.

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HIGH SCHOOL CADETS.

High school cadet companies have been organized in 14 high schools of the state in accordance with the provisions of "An act to provide for the organization, control and equipment of high school cadet companies, and for the promotion of rifle practice therein," approved April 5, 1911, and amended May 20, 1915.

A cadet company may be organized in any high school having forty or more pupils fourteen years of age or over. The minimum number of members in the cadet company has been fixed at forty. The members are under the guidance and control of the principal of the school concerned but the Adjutant General of California has compiled a book of suggestions concerning the organization and drill of cadet companies. The companies are inspected once each year by officers of the national guard or naval militia detailed by the Adjutant General for that purpose. The members of cadet companies must wear a uniform similar to that of the national guard of California. The companies are supplied with a sufficient number of obsolete rifles, and target practice is a part of the instruction given. The principal officers of the company are commissioned by the Adjutant General and are chosen from third and fourth year pupils.

Cadet drill is compulsory in the Placer Union High School at Auburn, but elective in all other schools in which cadet companies are maintained. In two schools the companies drill three times a week. In all other schools they drill twice a week. The average time devoted to cadet drill is a little over an hour each week.

The following table shows the organization of cadet companies in the state.

Table Showing Organization of High School Cadet Companies in California.

High school	Company	Commissioned officers	Enlisted	Aggregate
Placer (Auburn)	1 and 13	9	73	82
Gilroy	9	3	44	47
Marysville	18	3	44	47
San Jose	14 and 19	3	39	42
San Mateo	22 and 23	0	100	100
Alameda	11 and 12	9	119	128
Oakland Technical	20 and 21	9	143	152
Los Angeles High	2	3	41	44
Los Angeles High	3	3	43	46
Los Angeles High	4	3	37	40
Los Angeles High	24	2	31	33
Sacramento	5, 6 and 16	11	160	171
San Francisco (Mission)	7	3	61	64
San Francisco (Polytechnic)	8 and 10	8	102	110
San Francisco (Commerce)	17	3	45	48
Tamalpais (Mill Valley)	25	3	73	76
San Francisco (Lowell)	26 and 27	6	142	148
Totals	26	81	1,297	1,378

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INTRODUCTION OF SUPERVISED STUDY.

At no period in the history of secondary education has the problem of teaching pupils how to study been given greater emphasis than at present. Studies of statistics showing the number of pupils leaving school before graduation and investigations of the reasons for failure in school studies have aroused school administrators and teachers to the importance of teaching pupils *how* to attack the problems of the classroom. We have reason to believe that many pupils become discouraged in school work because they do not know *how* to study. We have been placing emphasis on the subject matter to be studied and have frequently lost sight of the pupil who must master the subject matter. We are coming to realize that the pupil, not the subject, is the center about which the school must be organized. The emphasis upon study is therefore indicative of a new spirit in secondary education.

The plan of supervised study.

Throughout the state the Commissioner has noted an earnest effort to solve the study problem. In most instances principals and teachers have adopted some plan of supervised study as the best means of solving the problem. Among the first schools to introduce supervised study in some form were Visalia, Placer (Auburn), Pasadena, Tamalpais Union (Mill Valley), Manual Arts (Los Angeles), and Vallejo high schools. The plans differ in detail of organization but are one in spirit and aim. Most of the schools that have introduced the plan are working on the hour basis. The teacher of a given subject has the class for one full hour and may divide the time between study and recitation as he thinks best. It has been found highly advantageous to have the study as well as the recitation of a lesson under the direction of the teacher of the subject.

Wherever the plan has been tried there has been improvement in the work of the pupils. It has been necessary to lengthen the school day in some schools in order to introduce supervised study but teachers have found that longer hours are less wearing than the worry over failures by the conscientious teacher under the old plan. It has been found that more teachers are required under the plan of supervised study but school boards have taken the position that it is cheaper to prevent failures than to carry a large number of repeaters in the various classes.

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Statistics showing effect of supervised study.

Principal John F. Engle of Placer Union High School has submi the following statistical study showing the effect of supervised st on pupils' marks:

Statistics 1915–1916.

	Superior	Strong	Medium	Poor	V
First semester— (old plan)	7.2%	14.1%	53.4%	15.5%	
Second semester— (supervised study)	12.8%	17.4%	53.3%	9.9%	
	+5.6%	+3.3%	—.1%	—5.6%	

The following table shows the effect of supervised study on fail in Placer Union High School in 1915–1916.

	First semester (unsupervised study)	Second sem (supervis study)
Number of courses taught	1,010	975
Failures	92.4	62
Percentage	9.3	6.

It will be observed that the introduction of supervised study had effect of almost doubling the number of "superior" marks. In first semester, under unsupervised study, 21.3 per cent were a "medium"; in the second semester, under supervised study, 30.2 cent were above "medium." The second table shows that the nur of failures was reduced by almost one-third.

The Commissioner is lending every encouragement to the superv study movement. Many schools introduced the plan at the begin of the current school year. As the plan demonstrates its value it commend itself undoubtedly to school faculties and boards of educa throughout the state.

THE HIGH SCHOOL LIBRARY.

Status of high school libraries.

Closely allied with the problem of teaching pupils how to study is problem of making the high school library a more efficient instrumer education. We have on the shelves of the high school libraries of (fornia 375,000 volumes. Estimates submitted by the principals indi that about one-third of these books are seldom used by high school pu With such wealth of supplementary and reference material avail the high school teachers should make every effort to use it for ed tional ends.

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An investigation of high school libraries in California made in 1915 showed a distribution with respect to size, as follows:

42 high schools had	500 books or less
82 high schools had	501–1000 books
51 high schools had	1001–1500 books
20 high schools had	1501–2000 books
22 high schools had	2001–3000 books
16 high schools had	3001–4000 books
3 high schools had	4001–5000 books
7 high schools had	over 5000 books

Special credentials in library work.

In September, 1915, the State Board of Education inaugurated the policy of granting special credentials upon which county boards of education may grant special certificates in library craft, technique and use. To obtain this credential, the candidate must give satisfactory evidence of at least four years of training, or the equivalent, subsequent to graduation from high school. This training must include adequate training in library work. The adoption of this policy has resulted in raising high school library work to the dignity of a profession and has encouraged the employment of librarians thoroughly trained for the work. During the year ending June 30, 1916, 30 credentials in library craft, technique and use were granted by the State Board of Education.

The smaller high schools can not afford to employ librarians whose time will be devoted strictly to the library. These schools must depend upon teachers holding high school certificates who have had some training in the functions and duties of the librarian. It has been stated that the University of California is looking forward to the establishment of a course in library work which prospective teachers may elect during their college course. The state library at Sacramento and the library schools at Riverside and Los Angeles have also manifested a willingness to cooperate with the State Board of Education in training teacher-librarians. With such cooperation the outlook for more efficient conduct of high school libraries is very favorable.

Need for a better policy concerning high school libraries.

Statistics compiled from replies to a questionnaire sent to high school principals show that the average annual expenditure for library books in the high schools of California is approximately a dollar and a half for each pupil. It is apparent to one who has inspected high school libraries that the library expenditure is not advantageously made in many schools. In many libraries there are rows of books that are seldom if ever used. Too frequently the books selected are of the type adapted to college rather than high school work. The shelves are filled with books that the teacher found helpful in her college courses. After they are placed on the shelves of the library, however, they are seldom used by the pupils or teacher.

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There is need for standardization of libraries especially in the smaller high schools. The staff of the state library, the California Association of Teachers of English and the Commissioner are working on the problem. The Commissioner hopes to publish a list of library books which will be helpful in building up libraries better adapted to high school work.

Cooperation with the county library.

California is fortunate in having an excellent county library system supported by county taxation. The librarians in the various counties are anxious to cooperate with the high schools and such cooperation is most desirable. In many of the counties, however, the funds available for the county library are not sufficient to permit the county library to install in each high school the reference and supplementary books necessary for high school work. The legislature of 1915 amended section 1741 of the Political Code so as to empower the high school board to enter into a contract with the county library for library service and pay for such service out of its funds. Several of the high schools have already taken advantage of the opportunity thus afforded.

The chief difficulty encountered in establishing cooperative relations between the high school and county library is the purchase of the necessary supplementary and reference material. It is quite unreasonable to expect the county library to install immediately $900 worth of books in a high school which pays only $100 for service. It is quite desirable, therefore, that the high school turn over to the county library sufficient funds to pay for the cost of those books which will remain in the high school building all the time. The state library staff has submitted a plan whereby the cost of such books shall be paid in three annual installments. After these books are installed, the extra service will be paid for by the high school board according to a fixed schedule which varies according to the size of the school. This extra service includes the furnishing of all books which are not needed in the high school building all the time, and the care of the reference library as well. I recommend this plan of cooperation to all high schools in which the library is not thoroughly equipped. In the larger schools, however, the library should be maintained directly by the high school board.

Status of high school librarians.

The following high schools report librarians devoting full time to their work:

Anaheim, Bakersfield (Kern), Berkeley, Eureka, Fresno, Fullerton, Hayward, Huntington Beach, Long Beach, Los Angeles, Los Angeles (Gardena), Los Angeles (Lincoln), Los Angeles (Manual Arts), Los Angeles (Polytechnic), Los Angeles (San Pedro), Monrovia, Oakland, Oakland (Fremont), Oakland (Technical), Ontario (Chaffey Union),

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Pasadena, Redlands, Riverside (Boys), Riverside (Girls), San Bernardino, San Diego, San Fernando, San Jose, Santa Ana, Santa Barbara, Santa Maria, Sacramento, Stockton, Whittier. *Total—34.*

The annual salaries paid to librarians in the various high schools mentioned above were as follows:

Salary	Number of high schools paying
$300- $400	1
400- 500	2
500- 600	1
600- 700	4
700- 800	4
800- 900	3
900- 1,000	4
1,000- 1,100	3
1,100- 1,200	1
1,200- 1,300	1
1,300- 1,400	3
1,400- 1,500	2
Over 1,500	5
Total	34

Of the 34 librarians giving full time to their work, 17 hold regular high school certificates or special certificates in library craft use and technique. With respect to training, 17 have had training in library schools and 8 have taken summer courses or private instruction in library work. Of the total number, 21 have had experience in public or college libraries.

Table Showing Schools Employing Teacher-Librarians and Time Devoted to Library Work.

High school	Time devoted to library work during day
San Mateo	5 periods
Lemoore	1 period
Puente	1 period
Hollister (San Benito)	1 period
Exeter	4 periods
Ferndale	1 period
Corona	1 period
Auburn	4 periods
Oakland (Vocational High)	1 period
Hemet	2 periods
St. Helena	1 period
Pomona	3 teachers, 2 periods a day each
Orange	2 periods
National City	3 periods
Santa Monica	4 periods
Venice	5 hours a day
Alameda	1 period
Alhambra	about 2 hours a day
Inglewood	4 or 5 periods
Salinas	1 period
Sonoma	3 periods
Santa Rosa	about 4 periods

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Training of teacher-librarians.

Of the teacher-librarians, 2 have had training in library schools, 7 have taken summer courses or private instruction in library work and 5 have had experience in public libraries. All teacher-librarians hold the regular high school certificate.

Instruction in library use.

In Pasadena High School the librarian gives one lecture on the use of the library to all first-year pupils. She also gives detailed instruction in library craft and technique to a vocational class, limited to third and fourth year pupils.

In Sacramento High School the librarian gives a course of five lectures to first-year pupils, followed by written practice work. She also prepares bibliographies and group collections of books for other teachers.

In Berkeley the librarian gives about 20 periods each week to library instruction (largely individual) in the tenth year.

In Oakland Technical High School the librarian gives two periods a day to library instruction. She is assisted by 10 pupils. The work begins with the second year.

In Manual Arts High School, Los Angeles, library instruction is given during the first year, 4 periods each week.

The Polytechnic High School in Riverside reports library instructions in the first year only. About 12 periods are given to the work.

In Santa Ana High School 3 or 4 periods each year are given over to instruction of first year pupils in library use.

In Oakland High School several lessons each year are given in all grades.

In Lincoln High School (Los Angeles) one period each year is given to instruction in the use of the library.

In the Girls High School, Riverside, pupils are given individual instruction. The time given varies from 3 to 5 periods each year.

Library instruction in the Fremont High School in Oakland is given during the first and fourth years. About 3 periods each year are devoted to the work.

In Polytechnic High School, Los Angeles, a course in library work is given five periods each week for 20 weeks. The course is open to eleventh and twelfth-year pupils.

In Los Angeles High School a graduated course of lectures is given to the pupils of all grades. These lectures are generally given at the opening of the term.

In Stockton High School a few lectures on library use are given at the beginning of the first year.

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PROBLEMS OF THE SMALL HIGH SCHOOL.

In 1915–1916 there were 60 high schools in California reporting an enrollment of 50 pupils or less. Grouped with respect to location, 25 are in the coast region and in the mountains bordering the great interior valley, 22 were in the great interior valley, and 13 were in southern California. Practically all of these schools in the mountains and coast region are in communities that show little growth in population during the last ten years. Those located in southern California and in the great interior valley are in sparsely settled districts. Of the total number, 28 have been established during the last four years and most of these have not yet reached normal enrollment. These small high schools have special problems which deserve careful consideration.

Frequent changes in teaching positions.

A study of the status of the teacher in the small high school throws some light on the problems of this type of school. Only 21 high schools employ less than four teachers. The official October reports show 8 small high schools employing two teachers; 13, three teachers; 15, four teachers; 15, five teachers; 6, six teachers; 1, seven teachers; 1, nine teachers; and 1, eleven teachers. These figures include part-time teachers. It would seem that for number of pupils enrolled the number of teachers employed in small high schools is quite adequate.

The Commissioner has compiled data showing that the tenure of principals and teachers in the small high schools is all too short. Of the 32 small high schools established previous to 1911–1912, 6 made no change in the principalship during the four years ending June 30, 1916; 11 made two changes; 12 made three changes; 2 made four changes; and 1 made five changes. The average tenure of principals was a little over two years. These schools employed in 1915–1916, 104 assistant teachers. Of this number only 10 were teaching in California high schools in 1911–1912. It would seem therefore that the small high schools are taught, for the most part, by teachers with little experience.

Longer tenure necessary.

It is recognized that many of the small high schools are doing satisfactory work. However, frequent changes in the teaching corps places these schools under a serious handicap. It is generally conceded that continuity of teaching service is quite essential to the maintenance of good school work. Whenever a change is made the incoming principal or teacher must study the school situation and adjust himself to community conditions. Two years is none too long for this study and adjustment, after which the principal or teacher

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may render far better service. A continuance of the tenure of the principal or teacher for several years beyond this period is generally desirable.

Not infrequently the change is made by the school board itself. In some instances a new school board feels that by virtue of its election it has a popular mandate that a change of some kind be made, so it proceeds to dismiss members of the faculty. This situation suggests the desirability of longer tenure for the trustees. It would be far better, the Commissioner believes, if trustees were elected for a five-year term, one trustee retiring each year. To this plan there may be objection on the ground that the constitution limits to four years the tenure of public officers not specifically excepted. It is possible, however, to increase the trustee's term to four years. It is desirable, also, that high school boards be authorized by law to employ principals for a four-year term after one year of probationary service.

A salary schedule suggested.

Most of the changes in the teaching corps of the smaller high schools are brought about by voluntary resignation. Teachers and principals are willing to leave positions in the small schools to accept positions paying better salaries. On pages 188–190 tables showing the salaries paid in the various classes of high schools are published. It will be noted that the average salary of principals in the small high schools is approximately $1,700 per annum. There are 35 high schools in California paying less than this amount and 215 high schools paying more. Naturally, the principals of small high schools aspire to become principals of schools paying better salaries. While it is impossible for the small high school to pay salaries comparable with those of the larger schools, the high school board may hold the principal for a longer period by adopting a graduated salary schedule based upon length of service in the community. By fixing the minimum salary at $1,600 per annum, for example, and advancing the salary $100 per annum until a maximum of $2,000 is reached, school boards in charge of small high schools will undoubtedly be able to retain the services of principals for a term of years.

When we consider teachers' salaries we find a similar situation. Good teachers are in demand and better salaries attract them. By adopting a salary schedule based upon experience the school board will establish a condition favorable to the retention of teachers by the district for a longer period. The Commissioner suggests that the minimum salary in small high schools be fixed at $1,000 per annum, and that provision be made for an increase in the salary annually until a certain maximum is reached. The additional amount paid to teachers under this plan will yield better returns to the community than the same amount expended for an additional teacher.

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Problems of the course of study.

In planning the course of study for small high schools it is not necessary to include all the subjects or courses taught in larger high schools. The law requires that the high school offer one course of study that will prepare graduates therein for admission to the state university. It does not require that the high school offer courses that will prepare graduates therein for admission to all of the colleges of the state university. The small high school should, generally speaking, limit its college preparatory course to subjects required for admission to the College of Letters and Science. Graduates who desire to enter other colleges may enter with certain deficiencies, and the ambitious student may remove these deficiencies after he has matriculated. There is a reasonable limit to public expenditure for education and this limit is exceeded when classes in certain branches are maintained for one or two pupils. In some instances courses are offered which are not required for admission to college, although classes in these courses are too small to justify their maintenance. Third and fourth year classes in languages may be cited as examples. Unless at least four pupils elect to take third or fourth year work in a language the advisability of maintaining a class in this work is extremely questionable. By making a careful study of community needs the principal may keep the course of study within reasonable bounds. Here, again, the need for better tenure is evident. The principal can not adapt the course of study to the needs of the community unless he has had time and opportunity to study these needs.

Possibilities of branch high schools.

Magnificent distances and magnificent community ambitions are responsible for the establishment of an increasing number of small high schools. We can not overcome the former reason and we should not attempt to overcome the latter. The people of a community have an undeniable right to offer their children the best educational opportunity they can afford. It is possible, however, for the state to assist smaller communities to solve their school problems in a way that will prove more economical as well as more efficient. The Commissioner is of the opinion that in many smaller communities the establishment of four-year high schools is unnecessary. It would be more economical for these communities to establish branch high schools offering the first two years of high school work, such branch high schools to be affiliated with neighboring four-year high schools which would admit third and fourth year pupils living in the districts served by the branches on such terms as may be agreed upon, allowing full credit for work done in the branch high schools. In large high school districts the establishment of branch high schools governed by the high school board of

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the entire district is preferable to division of the district. The board could maintain in the branch high schools as many years of work as the conditions might justify. The cost per pupil in the third and fourth years is much greater than the cost per pupil in the first and second years. The maintenance of branch high schools would, therefore, be more economical for these communities than the maintenance of independent four-year high schools.

Work of branch high schools.

Branch high schools are now maintained in four centers in California. The Siskiyou Union High School district has established two branch high schools, one at Sisson, the other at Dorris. Both of these schools are under the supervision of Mr. E. L. Van Dellen, principal of the high school at Yreka. The expense of maintenance is paid by the district. The principal visits the schools once each month and the teachers in the branch high schools attend the monthly teachers' meetings at Yreka. At present only one teacher for each school is employed. The school at Dorris enrolls 15 pupils and the school at Sisson, 12 pupils. By adopting this plan the high school board is serving parts of the district which have heretofore sent few pupils to high school and has forestalled a division of the district.

In Corning Union High School District a branch has been established at Los Molinos. The school enrolls between 40 and 50 pupils. Two teachers are employed and two years of work offered. This branch was established to provide high school advantages in a part of the district separated from the main part by the Sacramento River and two sloughs.

The King City High School District in Monterey County is maintaining a branch high school in San Antonio District in cooperation with the board of trustees of the elementary school. The enrollment in the high school course is eight, only one year of work being offered. The high school teacher is also principal of the elementary school and also teaches the eighth grade. The school is under the supervision of the principal of the King City High School. The work offered in the high school department includes English, first year science, commercial arithmetic and manual training. The salary of the teacher is shared by both boards according to the number of pupils enrolled in each department.

Branch intermediate schools.

Branch high schools offering two years of high school work may be made to render better service if the seventh and eighth grades are included in their organization. The present law, limiting the organization of intermediate school courses to districts having an enrollment of 100 pupils in the seventh and eighth grades should be amended so

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as to remove this limit. Community intermediate schools embracing the seventh, eighth, ninth and tenth years, organized as branches of neighboring high schools, or independently may be made to serve the educational needs of many communities that are now without high school facilities. The establishment of such schools will secure greater economy in school organization, greater efficiency in the work of the seventh and eighth grades and broader opportunity for hundreds of boys and girls in California.

TAXATION AND EXPENDITURE FOR HIGH SCHOOLS.

The total revenue of the high schools of California for the year 1915–1916, was $8,712,176.96. To this amount the state contributed $827,200.52; the counties, $3,326,893.22; and the districts $3,802,076.52. The miscellaneous receipts amounted to $756,006.70. It will be noted that the state and counties now contribute a little over 47 per cent of the total revenue of high schools. Comparison of this percentage with the percentage of revenue derived by the elementary schools from the state and counties reveals the fact that the high schools are deriving less than half their revenue from state and county taxes, while the elementary schools are deriving more than two-thirds of their revenue from these sources.

The county high school fund bill which was enacted by the legislature of 1915 secured for the high schools a stable basis of revenue comparable with that of the elementary schools. The effect of this bill is shown in the equalization of taxation for high school purposes. The table of high school tax rates published in this report (pages 191–196) shows that the smaller high school districts have been helped very greatly by the provisions of this bill.

Cost per pupil enrolled.

The average cost per pupil for maintenance based upon the number of pupils enrolled in undergraduate and postgraduate courses in California high schools was $75.83 for the year 1915–1916. A study of the table showing the cost per pupil, published elsewhere in this report (page 191) reveals a wide range in the cost of maintenance. In the smaller high schools the cost is considerably greater than in the larger schools. This difference in cost is due chiefly to the fact that larger classes are maintained in the larger schools. Classes in the small high school enrolling five or six pupils are maintained at a cost that is approximately the same as that for classes of twenty-five pupils in the larger schools. Since the minimum cost of maintaining a class, regardless of its size, is approximately $200 per annum, the cost per pupil for a class of 5 pupils is $40 per annum, whereas the cost per pupil for a class of twenty-five pupils is only $8 per annum. In comparing high

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schools with respect to cost per pupil we should keep in mind the fact that the smaller schools, because of their smaller classes, must show a cost per pupil in excess of that of the larger schools.

Frequently the difference in the cost per pupil in elementary and high schools is a matter of speculation and comment. Realizing that the public is entitled to a full explanation of this difference, the Commissioner states the reasons as follows:

(1) In the graded elementary school one teacher gives instruction to a group of 30 or 40 pupils. In 1914–1915 the average annual enrollment per teacher in the elementary schools of California was 32; in the high schools, 22. The smaller enrollment in the high school classes can not be avoided. The high schools allow pupils to elect studies and courses while most of the elementary schools require that all pupils of a given grade take the same subject at the same time. We must recognize that the high school enrolls pupils whose interests and educational needs differ greatly. If the high school were obliged to adopt the plan of organization of the elementary school it would fail to realize its purpose. The additional cost per pupil in the high school represents very largely the price the state pays for democracy in secondary education.

(2) The laws of California and the educational situation in the high school require that the high school teacher spend five years in training after graduation from the secondary school, whereas the elementary school teacher may prepare for her work in two years. For this reason the salaries of high school teachers are higher.

(3) In order to meet the needs of modern civilization the high school has been obliged to introduce courses in science and vocational work. These courses require the installation and maintenance of expensive equipment which adds to the cost per pupil.

Taking all of these factors into account we must realize that the difference in cost between elementary and high schools is a legitimate difference. However, the Commissioner recognizes that the elementary schools in many districts should have better financial support to enable them to meet the educational needs of their pupils. He recognizes also that the first duty of the state is to provide adequately for its elementary schools. In California, very fortunately, we do not have to choose between efficiency in the elementary schools and democracy in the high schools. The state has the means to provide adequately for both elementary and high schools.

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Table Showing Enrollment in California High Schools by Years (1902-1916).

Year	Boys	Girls	Total
1901-1902	5,830	8,462	14,292
1902-1903	7,499	9,974	17,473
1903-1904	9,219	12,230	21,449
1904-1905	10,525	13,728	24,253
1905-1906	12,374	15,701	28,075
1906-1907	11,372	16,202	27,578
1907-1908	14,102	17,912	32,014
1908-1909	15,386	18,912	34,298
1909-1910	17,680	21,435	39,115
1910-1911	20,453	24,036	44,489
1911-1912	21,922	25,498	47,420
1912-1913	26,831	31,247	58,078
1913-1914	30,918	35,009	65,927
1914-1915	36,218	40,211	76,429
1915-1916	45,986	49,419	95,405

Table Showing Number of Graduates and Number of Teachers Employed in California High Schools (1902-1916).

Year	Graduates			Teachers		
	Boys	Girls	Total	Men	Women	Total
1901-1902	757	1,150	1,907	295	311	606
1902-1903	799	1,275	2,074	337	404	741
1903-1904	880	1,368	2,248	370	485	855
1904-1905	1,007	1,584	2,591	407	590	997
1905-1906	1,078	1,735	2,813	445	692	1,137
1906-1907	1,100	1,790	2,890	420	768	1,188
1907-1908	1,187	1,981	3,168	480	834	1,314
1908-1909	1,495	2,281	3,776	566	924	1,490
1909-1910	1,720	2,527	4,247	649	1,062	1,711
1910-1911	1,864	2,898	4,756	783	1,213	1,996
1911-1912	2,154	3,204	5,357	910	1,402	2,312
1912-1913	2,606	3,951	6,557	1,049	1,592	2,644
1913-1914	3,079	4,398	7,477	1,206	1,791	2,997
1914-1915	3,525	4,851	8,376	1,394	1,989	3,383
1915-1916	3,781	5,182	8,963	1,610	2,389	3,999

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Table Showing Cost per Pupil per Annum for Maintenance in Elementary and High Schools of California, 1902-1916.

(Cost computed on the basis of state enrollment.)

Year	High school	Elementary school
1902–1903	$54 12	$23 17
1903–1904	60 10	23 35
1904–1905	59 22	23 16
1905–1906	71 95	26 75
1906–1907	77 24	28 09
1907–1908	68 09	25 91
1908–1909	70 99	30 17
1909–1910	74 85	31 98
1910–1911	80 88	34 76
1911–1912	90 21	34 41
1912–1913	90 96	37 51
1913–1914	88 95	35 72
1914–1915	87 10	39 06
1915–1916	*76 72	38 04

*Not including postgraduate students.

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Table Showing Maximum Salaries Paid to Teachers in High Schools (1915-1916).

Enrollment	$800	$900	$1,000	$1,100	$1,200	$1,300	$1,400	$1,500	$1,600	$1,700	$1,800	$1,900	$2,000	$2,100	$2,200	$2,300	$2,400
1- 50	1	2	13	11	17	2	8	4		2							
51- 100			2	10	19	11	7	9		3							
101- 200					11	18	15	17	5	3	2		1				3
201- 300							1	15	4	3	4	2	3		2		
301- 400							1	1		1			1				
401- 500							1	3			1				2		
501- 750								1	2	1	2	1	2		2		
751-1,000															2	1	1
1,000 and over											5		1	1	1	1	5
Total of schools enrolling less than 100	1	2	15	21	36	18	15	13		2							
Total schools enrolling more than 100					11	18	18	37	11	8	14	3	8	1	9	2	9
Total, all schools	1	2	15	21	47	26	33	50	11	10	14	3	8	1	9	2	9

NOTE.—The figures in the several columns indicate the number of schools with the given enrollment paying the maximum salary stated at the head of each column.

Table Showing Minimum Salaries Paid to Teachers in High Schools (1915-1916).

Enrollment	$800	$900	$1,000	$1,100	$1,200	$1,300	$1,400	$1,500
1- 50	1	10	27	13	8	1		
51- 100	3	4	12	22	16		1	
101- 200	3	3	19	20	19	4	2	
201- 300		4	5	14	8	2	1	
301- 400					3		1	
401- 500	1		1	1	3	1		
501- 750		2	1	2	4	1		1
751-1,000					1	2		1
1,000 and over			1		4	4	4	1
Total of schools enrolling less than 100	4	14	39	35	24	1	1	
Total of schools enrolling more than 100	4	9	27	37	42	14	8	3
Total, all schools	8	23	56	72	66	15	9	3

NOTE.—The figures in the several columns indicate the number of schools with the given enrollment paying the minimum salary stated at the head of each column.

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Table Showing Salaries Paid to High School Principals (1915-1916).

Enrollment	$1,100	$1,200	$1,300	$1,400	$1,500	$1,600	$1,700	$1,800	$1,900	$2,000	$2,100	$2,200	$2,300	$2,400	$2,500	$2,600	$2,700	$2,800	$2,900	$3,000	$3,100	$3,200	$3,300	$3,400	$3,500	$3,600	Average
1- 50	1		2	4	11	7	6	14	2	9	2	1					1										$1,724
51- 100				2	2	4	6	20	8	10	8	4		3	1												1,872
101- 200						2		10	6	11	6	4	6	15	4			1		4						1	2,208
201- 300										6	1	1	3	9	3	2	4		1	4							2,417
301- 400										2	1			1													2,125
401- 500												2			1			2		2							2,640
501- 750												2		1	1		3	1		2						1	2,704
751-1,000																				2		2					3,150
1,000 and over																				3			5		1	2	3,357
Totals	1		2	6	13	13	12	44	11	38	13	14	9	29	10	2	8	4	1	13		2	5		1	7	

NOTE.—The figures in the several columns indicate the number of schools with the given enrollment paying the salary stated at the head of each column.

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Table Showing Enrollment Cost Per Pupil and Tax Rates in Various High School Districts of California (1914–1916).

The cost per pupil is computed according to number of pupils enrolled instead of average daily attendance to conform with the practice of computing average cost per pupil in the elementary schools.

Counties and high schools	Enrollment		Total cost per pupil for maintenance		Tax rate for maintenance, 1914-15	Tax rate for maintenance, 1915-16		
	1914-15	1915-16	1914-15	1915-16		County	District	Total
Alameda—								
Alameda	690	807	$63 91	$60 09	$.25	$.14	$.10	$.24
Berkeley	1,772	1,609	70 24	84 54	.31	.14	.12	.26
Hayward	138	148	134 72	116 97	.34	.14	.28	.42
Livermore	108	118	101 68	68 61	.32	.14	.12	.26
Oakland:								
Classical	1,010	893						
Classical, Evening		1,206						
J. C. Fremont	1,007	1,062						
Technical	1,130	1,750	99 25	68 49	.31	.14	.12	.26
Technical, Evening		93						
University	100	169						
Vocational	30	113						
Washington (Centerville)	133	127	109 02	115 13	.18	.14	.04	.18
Amador—								
Amador (Sutter Creek)	57	59	215 56	135 33	.35	.20	.15	.35
Ione	48	42	93 10	157 61	.40	.20	.10	.30
Jackson	93	97	88 50	83 33	.45	.20	.20	.40
Butte—								
Biggs	45	43	150 23	203 98	.30	.225	.15	.375
Chico	460	540	50 08	48 68	.30	.225	.07	.295
Gridley	121	148	93 87	80 96	.50	.225	.17	.395
Oroville	168	175	72 58	64 74	.25	.225	.08	.305
Calaveras—								
Bret Harte (Angels Camp)	88	81	79 47	90 65	.45	.11	.11	.22
Calaveras (San Andreas)	42	55	154 78	123 88	.10	.11	.19	.30
Colusa—								
Colusa	86	82	133 40	122 40	.30	.10	.30	.40
Maxwell	50	43	125 73	145 96	.30	.10	.15	.25
Pierce (College City)	48	50	180 21	191 71	.15	.10	.03	.13
Princeton	43	51	234 15	186 56	.17	.10	.27	.37
Williams	37	42	274 52	208 75	.30	.10	.33	.43
Contra Costa—								
Alhambra (Martinez)	77	87	131 84	129 40	.47	.10	.35	.45
John Swett (Crockett)	86	96	146 68	129 18	.31	.10	.20	.30
Liberty (Brentwood)	61	56	163 63	168 01	.20	.10	.15	.25
Mt. Diablo (Concord)	117	135	123 32	119 69	.20	.10	.17	.27
Richmond	242	279	100 34	90 99	.13	.10	.11	.21
Riverview (Antioch)	105	132	131 10	211 12	.52	.10	.40	.50
San Ramon (Danville)	82	43	176 79	134 36	.24	.10	.20	.30
Del Norte—								
Del Norte (Crescent City)	77	69	117 66	144 22	.18	.19		.19
El Dorado—								
El Dorado (Placerville)	122	107	85 46	101 06	.18	.11	.18	.29
Fresno—								
Caruthers	25	26	128 83	274 29	.40	.15	.43	.58
Clovis	124	151	127 53	125 45	.70	.15	.43	.58
Coalinga	88	102	146 20	123 70	.15	.15	.12	.27
Fowler	127	140	122 43	97 71	.35	.15	.27	.42
Fresno	970	1,145	89 91	79 82	.29	.15	.25	.40
Kerman	64	63	190 11	227 77	.55	.15	.63	.78
Kingsburg	126	118	78 17	81 63	.65	.15	.20	.35
Laton	70	70	114 72	125 45	.37	.15	.45	.60
Reedley	184	184	121 44	141 80	.40	.15	.28	.43
Riverdale	30	89	97 79	210 45	.23	.15	.20	.35
Sanger	130	116	108 52	134 48	.55	.15		.15
Selma	242	254	92 63	92 85	.65	.15	.43	.58
Washington (Easton)	119	100	125 99	133 86	.55	.15	.44	.59

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Table Showing Enrollment Cost Per Pupil and Tax Rates in Various High School Districts of California (1914-1916)—Continued.

Counties and high schools	Enrollment		Total cost per pupil for maintenance		Tax rate for maintenance, 1914-15	Tax rate for maintenance, 1915-16		
	1914-15	1915-16	1914-15	1915-16		County	District	Total
Glenn—								
Glenn (Willows)	94	102	111 54	134 63	.15	.08	.12	.20
Orland	100	116	77 24	105 47	.20	.08	.16	.24
Humboldt—								
Arcata	108	150	91 50	84 14	.436	.12		.12
Eureka	419	419	68 07	73 60	.305	.12	.0767	.1967
Ferndale	129	118	78 77	86 05	.443	.12	.066	.186
Fortuna	85	103	67 06	90 18	.50	.12		.12
Imperial—								
Brawley	133	143	215 22	156 68	.60	.15	.22	.37
Calexico	69	72	204 24	201 03	.75	.15	.36	.51
Central (El Centro)	263	282	132 69	138 89	.75	.15	.40	.55
Holtville	100	113	145 37	123 09	.30	.15	.24	.39
Imperial	114	129	288 21	194 20	.63	.15	.44	.59
Imperial, Evening		111		13 33				
Inyo—								
Big Pine	24	29	199 20	148 07	.36	.10	.13	.23
Bishop	129	151	84 34	79 60	.33	.10		.10
Kern—								
Conley (Taft)		65		148 06			.20	.20
Delano	57	62	179 48	166 96	.50		.60	.60
Kern (Bakersfield)	481	550	132 07	114 76	.085		.11	.11
Maricopa		41		129 24			.25	.25
Wasco		80		179 55			.30	.30
Kings—								
Corcoran	52	62	171 15	189 77	.80	.13	.42	.55
Hanford	201	229	116 22	122 43	.40	.13	.30	.43
Lemoore	78	108	142 88	117 51	.25	.13	.45	.58
Lake—								
Clear Lake (Lakeport)	125	127	71 68	71 61	.22	.165	.04	.205
Middletown	28	32	61 15	104 62	.29	.165	.38	.545
Lassen—								
Lassen (Susanville)	49	74	228 83	150 79	.15	.05	.16	.21
Los Angeles—								
Alhambra	404	444	112 21	128 14	.75	.145	.42	.565
Antelope (Lancaster)	29	41	217 26	278 19	.25	.145	.39	.535
Bonita (Lordsburg)	113	134	114 87	104 00	.50	.145	.23	.375
Burbank	100	104	125 98	134 84	.50	.145	.18	.325
Citrus (Azusa)	157	187	163 18	149 38	.68	.145	.56	.705
Claremont	123	124	130 43	138 07	.70	.145	.42	.565
Compton	227	247	141 55	178 91	.40	.145	.44	.585
Covina	230	215	116 43	145 11	.52	.145	.27	.415
El Monte	121	121	121 62	151 61	.43	.145	.20	.345
Excelsior (Norwalk)	87	94	110 89	116 97	.75	.145	.60	.745
Glendale	434	588	107 31	105 77	.65	.145	.47	.615
Huntington Park	210	216	167 76	207 38	.50	.145	.59	.735
Inglewood	219	275	209 48	123 01	.30	.145	.44	.585
Long Beach	1,636	1,613	45 91	62 48	.44	.145	.13	.275
Long Beach, Evening	611	784						
Los Angeles city:								
Franklin		12						
Gardena	225	231						
Hollywood	1,332	1,460						
Lincoln	861	906						
Lomita		17						
Los Angeles Classical	2,109	2,062						
Los Angeles Evening	2,018	3,378						
Manual Arts	2,740	2,733	65 09	57 91	.34	.145	.21	.355
McKinley Ave., Eve'g		1,216						
Polytechnic	2,911	2,971						
Polytechnic Evening	7,766	10,292						
San Pedro	144	183						
San Pedro Evening		379						
Van Nuys	35	66						
Wilmington	44	55						
Wilmington Evening		71						

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Table Showing Enrollment Cost Per Pupil and Tax Rates in Various High School Districts of California (1914-1916)—Continued.

Counties and high schools	Enrollment		Total cost per pupil for maintenance		Tax rate for maintenance, 1914-15	Tax rate for maintenance, 1915-16		
	1914-15	1915-16	1914-15	1915-16		County	District	Total
Los Nietos (Downey)	92	111	142 49	141 41	.75	.145	.43	.575
Monrovia	239	292	123 24	115 27	.75	.145	.31	.455
Montebello	73	55	198 95	215 09	.65	.145	.44	.585
Owensmouth*	11	38	270 80		.16			
Pasadena	1,643	1,650	112 51	79 53	.40	.145	.21	.355
Pasadena Evening		807						
Pomona	597	657	38 00	78 61	.75	.145	.50	.645
Pomona Evening	1,090	590						
Puente		62		189 63	.20	.145	.52	.665
Redondo	168	203	140 35	130 05	.31	.145	.30	.445
San Fernando*	124	141	216 74		.65			
Santa Monica	568	590	58 63	67 45	.54	.145	.44	.585
Santa Monica Evening	321	524						
South Pasadena	322	314	87 81	100 33	.50	.145	.18	.325
Venice	198	228	199 52	141 58	.55	.145	.60	.745
Venice Evening		227						
Whittier	472	500	108 56	108 22	.50	.145	.16	.305
Madera—								
Madera	120	143	135 26	120 58	.15	.06	.08	.14
Raymond-Granite		23		102 25		.06	.20	.26
Marin—								
San Rafael	216	247	84 11	71 29	.25	.11	.15	.26
Tamalpais (Mill Valley)	229	276	108 03	101 67	.48	.11	.45	.56
Tomales	20	26	156 28	126 13	.16	.11	.08	.19
Mariposa—								
Mariposa	24	26	84 46	139 54	.10	.18		.18
Mendocino								
Anderson (Boonville)	29	51	153 37	122 80	.50	.17	.20	.37
Fort Bragg	89	113	64 01	69 26	.61	.17	.12	.29
Mendocino	72	77	103 41	141 34	.08½	.17	.05	.22
Point Arena	27	38	140 58	114 95	.20	.17	.10	.27
Round Valley (Covelo)	34	43	107 79	132 66	.36	.17	.165	.335
Ukiah	169	157	92 61	99 69	.16⅔	.17	.05	.22
Willits	86	82	83 60	75 24	.25	.17	.06	.23
Merced—								
Dos Palos	76	70	164 60	161 82	.10	.10	.15	.25
Gustine	38	41	239 62	286 84	.35	.10	.40	.50
Hilmar Colony (Irwin)	41	49	159 57	111 58	.60	.10	.30	.40
Le Grande	74	71	166 45	175 55	.60	.10	.30	.40
Merced	171	194	109 10	101 64	.15	.10	.10	.20
West Side (Los Banos)	35	44	260 23	229 78	.20	.10	.20	.30
Modoc—								
Big Valley (Adin)		30		101 00		.10	.08	.18
Modoc (Alturas)	91	78	140 75	137 16	.20	.10	.10	.20
Surprise Valley (Cedarville)	68	65	108 40	119 09	.45	.10	.14	.24
Monterey—								
Gonzales	46	45	180 51	195 33	.35	.10	.15	.25
King City	78	85	233 59	144 84	.20	.10	.14	.24
Monterey	108	122	161 88	97 81	.20	.10	.13	.23
Pacific Grove	116	132	122 73	114 23	.95	.10	.43	.53
Salinas	173	172	82 00	87 10	.30	.10	.06	.16
Napa—								
Calistoga	91	128	75 84	79 71	.42	.14	.31	.45
Napa	273	262	72 10	73 65	.22	.14	.14	.28
St. Helena	90	89	110 55	108 09	.39	.14	.36	.50
Nevada—								
Grass Valley	179	195	48 98	57 85	.25	.30	.15	.45
Meadow Lake (Truckee)	32	39	156 52	102 93	.35	.30	.05	.35
Nevada City	144	134	56 86	73 19	.40	.30		.30

*Los Angeles city 1915-1916.

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Table Showing Enrollment Cost Per Pupil and Tax Rates in Various High School Districts of California (1914-1916)—Continued.

Counties and high schools	Enrollment		Total cost per pupil for maintenance		Tax rate for maintenance, 1914-15	Tax rate for maintenance, 1915-16		
	1914-15	1915-16	1914-15	1915-16		County	District	Total
Orange—								
Anaheim	285	334	117 11	111 29	.90	.20	.55	.75
Fullerton	283	354	267 40	196 28	.57	.20	.40	.60
Huntington Beach	156	161	168 42	169 50	.55	.20	.60	.80
Orange	294	304	117 33	101 23	.75	.20	.45	.65
Santa Ana	733	869	99 36	95 31	1.00	.20	.50	.70
Placer—								
Lincoln	58	54	156 55	157 02	.45	.20	.25	.45
Placer (Auburn)	206	184	90 58	125 51	.30	.20	.25	.45
Roseville	97	189	116 14	58 33	.65	.20	.37	.57
Plumas—								
Plumas (Quincy)	50	43	174 91	207 21	.12	*	*	*
Riverside—								
Banning	40	36	185 30	236 20	.68	.29	.51	.80
Beaumont	58	61	154 49	167 17	.75	.29	.59	.88
Coachella	40	49	167 18	181 29	.22	.29	.06	.35
Corona	112	138	138 27	115 97	.49	.29	.48	.77
Elsinore	42	45	146 51	130 05	.68	.29	.33	.62
Hemet	173	194	95 29	93 07	.59	.29	.57	.86
Palo Verde (Blythe)	29	21	143 07	257 82	.75	.29	.36	.65
Perris	59	55	108 94	120 90	.42	.29	.19	.48
Riverside, Boys'	337	421	127 48	85 82	.54	.29	.23	.52
Riverside, Girls'	385	408	68 83	70 38	.54	.29	.23	.52
San Jacinto	70	81	116 33	107 09	.75	.29	.62	.91
Sacramento—								
Elk Grove	59	54	106 40	139 78	.20	.104	———	.104
Galt	48	54	173 35	199 93	.36	.104	———	.104
Sacramento	1,251	1,477	49 11	55 18	.154	10.4	.065	.169
Sacramento, Evening	989	1,901						
San Juan (Fair Oaks)	56	92	136 38	124 02	.56	.104	———	.104
San Benito—								
San Benito (Hollister)	165	165	81 40	88 94	.15	.15	———	.15
San Bernardino—								
Barstow	———	25	———	213 87	———	.224	.15	.374
Chaffey (Ontario)	505	537	92 51	101 43	.70	.224	.42	.644
Chino	114	102	135 46	144 15	.46	.224	.40	.624
San Bernardino	535	615	79 85	70 10	.31	.224	.27	.494
Colton	136	152	95 12	99 57	.42	.224	.30	.524
Needles	37	36	172 87	207 03	.25	.224	.30	.524
Redlands	514	553	96 78	102 04	.56	.224	.30	.524
Victor Valley (Victorville)	———	20	———	297 08	———	.224	.45	.674
San Diego								
Coronado	84	95	183 53	176 69	.69	.19	.63	.82
Cuyamaca (Julian)	81	22	146 10	204 22	.66	.19	.50	.69
El Cajon	116	117	95 66	101 94	.75	.19	.40	.59
Escondido	139	133	94 31	102 42	.75	.19	.74	.93
Fallbrook	40	31	172 30	211 55	.38	.19	.56	.75
National (National City)	202	229	96 81	85 80	.61	.19	.56	.75
Oceanside	60	64	143 23	163 96	.46	.19	.35	.54
Ramona	43	40	129 72	139 72	.75	.19	.75	.94
San Diego	1,876	1,995	107 55	48 11	.85	.19	.144	.334
San Diego Evening	———	1,917						
San Francisco—								
Commercial	967	1,126						
Commercial, Evening	———	1,504						
Girls'	626	720						
Humboldt, Evening	2,159	2,298	53 43	39 30	†	.0477	———	.0477
Lowell	1,094	1,172						
Mission	527	569						
North Beach Evening	72	80						
Polytechnic	681	1,077						

*Auditor could not state.
†Paid out of general tax levy of .222.

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Table Showing Enrollment Cost Per Pupil and Tax Rates in Various High School Districts of California (1914-1916)—Concluded.

Counties and high schools	Enrollment		Total cost per pupil for maintenance		Tax rate for maintenance, 1914-15	Tax rate for maintenance, 1915-16		
	1914-15	1915-16	1914-15	1915-16		County	District	Total
Stanislaus—								
Ceres	94	131	205 58	101 38	.87	.20	.75	.95
Denair	46	55	101 57	121 51	.20	.20	.72	.92
Hughson	48	58	147 68	163 47	.65	.20	.75	.95
Modesto	254	312	85 69	80 54	.4886	.20	.45	.65
Oakdale	128	117	83 75	113 87	.26	.20	.10	.30
Orestimbo (Newman)	67	75	163 76	145 35	.35	.20	.30	.50
Patterson	51	49	201 01	162 36	.36	.20	.45	.65
Turlock	206	217	90 64	90 88	.28	.20	.25	.45
Sutter—								
Sutter City	102	103	155 87	130 06	.33	.10	.33	.43
Tehama—								
Corning	125	159	88 79	82 51	.40	.15	.20	.35
Red Bluff	224	236	83 91	80 89	.40	.15	.20	.35
Trinity—								
Trinity (Weaverville)	34	39	174 55	146 99	.15	.15	----------	.15
Tulare—								
Alpaugh	23	17	180 03	342 53	.58	.20	.17	.37
Dinuba	219	212	81 01	88 39	.75	.20	.33	.53
Exeter	146	165	113 18	95 02	.75	.20	.22	.42
Lindsay	137	174	117 27	87 87	.35	.20	.17	.37
Orosi	60	53	141 22	157 18	.72	.20	.24	.44
Porterville	269	303	96 32	88 20	.75	.20	.55	.75
Tulare	272	385	77 90	52 35	.75	.20	.18	.38
Visalia	275	274	99 51	92 52	.60	.20	.47	.67
Woodlake	25	32	149 05	184 38	.45	.20	.40	.60
Tuolumne—								
Summerville (Tuolumne)	55	53	135 36	141 18	.45	.25	.45	.70
Tuolumne (Sonora)	152	152	107 43	113 73	.25	.25	.25	.50
Ventura—								
Fillmore	114	134	130 78	99 74	.60	.11	.28	.39
Nordhoff	53	66	132 89	94 50	.66	.11	.28	.39
Oxnard	112	140	138 56	121 85	.17	.11	.08	.19
Santa Paula	121	150	112 43	95 62	.45	.11	.16	.27
Ventura	171	204	137 57	103 66	.25	.11	.07	.18
Yolo—								
Esparto	49	40	134 18	176 90	.33	.1022	.20	.3022
Winters	113	83	79 61	113 82	.40	.1022	.23	.3322
Woodland	257	295	83 42	66 94	.50	.1022	.22	.3222
Yuba								
Marysville	172	222	114 00	58 66	.40	.05	.35	.40
Marysville, Evening	----------	93						
Wheatland	18	22	255 53	226 67	.70	.05	.70	.75

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aiding the other commissioners and the board in the examination and selection of textbooks, the investigation and regulation of the normal school courses, the service attendant upon educational legislation and a large amount of miscellaneous office work, curtailed very greatly the opportunity of your commissioner to do field work. However, during the biennial period he made seventy-six trips to various communities where he inspected schools, counseled with school authorities and others interested in education, and delivered a total of sixty-four addresses.

This office has edited two numbers of the Blue Bulletin in addition to contributing regularly to the other issues.

At your request my department had prepared and published a vocational guidance bibliography. The services of Mr. Charles L. Jacobs of San Jose, California, were secured for this work. The reception of this bulletin in California and other states is sufficient evidence of its need and its merit. Although six thousand copies were provided the issue is practically exhausted. Several eastern educational institutions and city school departments requested large numbers. some desiring as many as a hundred copies. These they invariably offered to purchase, but having no authority to sell such publications the department forwarded a few copies to each with the proper explanation.

Since large numbers of other publications of your department are being sought for educational purposes by institutions outside the state and by individuals within and without the state who wish to make commercial use of them, perhaps it would be well for you to have the problem investigated in order to find whether or not it would be desirable to seek the authority to make a charge, under certain conditions, for some of your publications.

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the need of the vocation. Drawing, science and mathematics courses provided for individuals engaged in trade or industrial occupations are good illustrations.

3. Where a subject is supplementary, name the vocation or vocations which it supplements.

A few of the schools failed to report even after having been notified four times, and other schools failed to report all of the courses maintained. In certain of these cases the desired information has been secured indirectly and is incorporated in the report. Some omissions will therefore appear in the report, but probably few, if any, courses are listed where they do not exist.

In several instances, Table I, pages 204–209, shows that some high schools gave certain courses before they appear to have been established. This is explained by the fact that many of the schools existed before they qualified for state aid at the date given.

The household art, commercial, and agricultural courses are all listed as vocational since in every case they are governed by the idea of preparing for a profitable occupation. In many cases these courses are not truly vocational, but the failure to make them so is not due to intent, but rather to a lack of knowledge of what to teach and how to teach it. Experience alone can furnish this knowledge.

The vocational courses listed under woodwork are usually pattern making, carpentry, or bench work in wood and wood manufacture. The vocational courses listed under ironwork are usually machine shop or blacksmithing courses. Many of the strictly vocational courses reported are to be found in the footnotes. The following is a summary of these:

Automobile mechanics	12 schools
Applied elements of civil engineering	7 schools
Applied elements of electrical engineering	10 schools
Applied elements of mechanical engineering	5 schools
Applied elements of architectural engineering	3 schools
Applied elements of structural engineering	3 schools
Applied elements of mining engineering	1 school
Applied elements of marine engineering	1 school
Printing	8 schools
Blacksmithing	4 schools
Salesmanship	3 schools
Advertising	1 school
Window dressing	2 schools
Journalism	1 school
Library craft	3 schools
Millinery for the trade	4 schools
Dressmaking for the trade	3 schools
Vocational drawing	11 schools

The automobile mechanics courses prepare the students for general garage work and include a study of ignition systems, carburetors, tumbling and general repair.

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The courses in applied elements of engineering deal primarily with the mechanical, industrial and other practical aspects of the work, and deal with the technical side only to the extent necessary in establishing a comprehension of the applied work. These courses are not planned to duplicate the work of the university in the engineering field, but are designed to prepare young men directly for industrial work. At the same time they are so organized as to give them a sufficient amount of the underlying science and mathematics to enable them to advance in their chosen occupations. In most of the industrial fields the secondary group of leaders is recruited from the experienced workers. These men must have not only industrial experience, but also a reasonable amount of technical knowledge. The men employed as foremen and superintendents outnumber many times those employed as engineers. It is for such positions that the applied courses in these subjects aim to prepare young men.

Printing as a vocational subject in California high schools is comparatively new, none other than craft courses dating back more than four years. These courses are unusually successful. This is probably due largely to the ease with which the job printing establishment may be duplicated in the schoolroom, together with the opportunity for practical work growing out of the needs of the various city school departments. However, another factor has had much to do with this success—these courses are handled in most cases by practical printers.

The blacksmithing courses listed above are not courses in forging, such as are usually given in technical schools. They are courses in real blacksmithing and are designed to prepare young men for the work. They aim to produce a commercial product and in some cases they are succeeding admirably.

Courses in salesmanship are more or less successfully maintained in three day high schools in the state. The courses are new and are largely of an experimental character. This is one of the most promising fields for vocational training and will be more fully discussed later.

Millinery and dressmaking for the trade exist in three or four high schools in the state. The courses are conducted by experienced milliners and dressmakers and are fitting many young women for profitable employment.

Vocational drawing courses were reported by eleven schools. These include such subjects as machine design, and drafting and plotting as applied to the various fields of engineering.

Vocational and semivocational courses in band and orchestral music are maintained by a number of the largest high schools in the state. The high schools of Oakland have probably advanced further along this line than those of any other district, though the work is being rapidly developed in other sections, notably in and around Los Angeles city.

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TABLE I.

Statistical Report of Manual and Vocational Subjects Taught in California Day High Schools.

Explanation: P indicates that the course is of a prevocational, preparatory, cultural or disciplinary character; V indicates that the course is vocational; S indicates that the course directly supplements a vocation. The number indicates the year the course was introduced.

School and date of establishment	Manual and industrial arts			Household arts		Commercial training for office work	Agriculture, one or more phases
	Wood work	Iron work	Craft work	Science	Art		
Adin, '15	*	*	*	*	*	*	*
Alameda[1], '75	P '12	P '14	P --	V '12	V '12	V '12	
Alhambra, '98	P '11	P '11		V '11	V '11	V '07	
Alpaugh, '13	*	*	*	*	*	*	*
Alturas, '06	P '14			V '13	V '13	V '05	
Anaheim, '98	P --					V --	
Anderson, '09	PS '15					V '09	V '16
Angels Camp, '05						V '06	
Antioch, '03	P '12			V '12	V '12	V '10	V --
Arcata, '94						V '10	V --
Arroyo Grande, '92						V '08	
Auburn, '01	P '12		P '12	V '10	V '10	V '05	
Azusa, '91	P '10			V '11	V '11	V '08	
Bakersfield, '92	P --	P --		V '08	V '08		V '11
Banning, '94				V '15	V '15		
Barstow, '15				V '15	V '15	V '15	
Beaumont, '09				V '14	V '14	V '14	
Benicia[2], '97	PV '13			V '15	V '15		
Berkeley[3], '83	V '09		P '11	V '09	V '09	V '09	
Biggs, '12	P '13				V '13	V '13	
Big Pine, '09						V --	
Bishop, '02	P '15			V '15	V '15	V '14	V '15
Blythe, '14						V '14	
Boonville, '12						V '13	V '15
Bostonia, '93						V --	
Boulder Creek, '05						V '15	
Brawley, '08	P '09			V --	V --	V '10	
Brentwood, '01	P --					V --	
Burbank, '08	P '11			V '11	V '11	V --	
Calexico, '10	P '13			V '13	V '13	V --	
Calistoga, '12				V '15	V '15	V '12	
Campbell, '00	PS '12					V --	
Carpinteria, '14	P '15						
Caruthers, '14	*	*	*	*	*	*	*
Cedarville, '03	P '14			V '14	V '14	V --	V '14
Centerville[4], '92	P '11			V '11	V '11	V '08	V '12
Ceres, '08	P '14			V '14	V '14	V '15	
Chico, '02	P '11					V --	V '12
Chino, '97	P '11			V '12	V '12	V '15	V --
Claremont, '10	P '10			V '11	V '11	V '11	
Cloverdale, '91	*	*	*	*	*	*	*
Clovis, '99	P '14			V '13	V '13	V --	
Coachella, '10	P '13					V '12	
Coalinga, '08	P '13			V '13	V '13	V '13	
College City, '97	P '13			V '12	V '12	V '06	
Colton, '95	P '14			V '14	V '14	V '05	
Colusa, '93	P --			V '14	V '14	V --	
Compton, '96	P '09	P '09		V '09	V '09	V '09	
Concord, '01	P '13			V '13	V '13		
Corcoran, '12	P --			V '14	V '14	V '13	
Corning, '03				V --	V --	V --	
Corona, '94	P '11			V '11	V '11	V '14	
Coronado, '13	P --	P --		V '13	V '13	V '13	
Covelo, '06	PS '15			V '15	V '15	V '16	
Covina, '99	P '09			V '09	V '09	V '07	

*Reports no courses.

[1]Maintains courses in applied elements of civil and electrical engineering.

[2]Maintains course in applied elements of civil engineering, introduced 1913.

[3]Maintains course in library craft, introduced 1915.

[4]Maintains course in printing, introduced 1915.

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TABLE I—Continued.

Statistical Report of Manual and Vocational Subjects Taught in California Day High Schools.

Explanation: P indicates that the course is of a prevocational, preparatory, cultural or disciplinary character; V indicates that the course is vocational; S indicates that the course directly supplements a vocation. The number indicates the year the course was introduced.

School and date of establishment	Manual and industrial arts			Household arts		Commercial training for office work	Agriculture, one or more phases
	Wood work	Iron work	Craft work	Science	Art		
Crescent City, '98	P --			V '14	V '14	V '14	V '15
Crockett, '01	P '13				V '12	V --	
Danville, '10					V '15	V '14	
Delano, '11	P --			V --	V --	V --	
Denair, '12						V --	
Dinuba, '99	P --			V --	V --	V --	
Dixon, '93				V '15	V '15	V '12	
Dos Palos, '07				V '14	V '14	V --	V '15
Downey, '08	P '14					V '10	
Dunsmuir, '11						V '13	
El Cajon (see Bostonia).							
El Centro, '08	P --			V '13	V '13	V --	V --
Elk Grove, '93	P '14			V '12	V '12		V '12
El Monte, '01	P '15			V '15	V '15	V --	
Elsinore, '91				V '14	V '14		
Escondido, '94	P '10	P '10		V '10	V '10		
Esparto, '92	P '16			V '13	V '13	V '10	
Etna Mills, '92	PS '16			V '15	V '15	V --	V '13
Eureka, '95	P '09			V '08	V '08	V --	
Exeter, '08	P '11			V '11	V '11	V --	
Fairfield, '91	PV '12	P '15		V '14	V '14	V '98	
Fair Oaks, '13				V '15	V '15	V '13	
Fallbrook, '92				V '14	V '15	V --	
Ferndale, '04				V '13	V '13	V '13	V '13
Fillmore, '09	P '11			V '15	V '15	V --	
Fort Bragg, '02				V '14	V '14	V '05	
Fortuna, '05	*	*	*	*	*	*	*
Fowler, '98	P --			V --	V --	V --	
Fresno[5], '89	P --	P '12	P '11	V '08	V '08	V '02	V '09
Fullerton, '98	P '09	P '09		V '08	V '08	V --	
Galt, '12	P '15			V '12	V '12	V --	
Geyserville, '15	*	*	*	*	*	*	*
Gilroy, '78	P '12			V --	V --	V '10	
Glendale, '01	P '14	P '14	P'14	V '11	V '11	V '10	V '11
Gonzales, '08					V '14	V '10	
Grass Valley, '02						V '02	
Gridley, '92	P --			V '10	V '10	V '10	
Gustine, '13	P '15			V '15	V '15	V '13	
Half Moon Bay, '09	P --			V '14	V '14	V '13	
Hanford, '92	P '14			V '09	V '13	V --	V --
Hayward, '92	P --	P --		V '13	V '13	V --	
Healdsburg, '88	P '11					V --	
Hemet, '94	P '12			V '13	V '13	V --	V '15
Hollister, '95	P '10			V '16	V '16	V '10	
Holtville, '09	P '15			V '15	V '15	V --	V '15
Hughson, '10	P '15			V '15	V '15	V '13	
Huntington Beach, '03	P '10			V '10	V '10	V '10	V '11
Huntington Park[6], '09	P '09	P '09		V '09	V '09	V '09	
Imperial[7], '06	P '09	P '09		V '09	V '09	V '09	V '09
Inglewood, '05	P '14	P '14	P '14	V '15	V '15	V '05	V '13
Ione, '08						V --	
Irwin, '11	P --				V --	V --	
Jackson, '11						V --	
Julian, '91						V '08	
Kerman, '10				V '13	V '13	V '13	V '15
King City, '10	P '14	P '14	P '14	V '11	V '11	V '12	V '13

*Reports no courses.
[5]Maintains course in automobile mechanics, introduced 1914.
[6]Maintains course in printing, introduced 1914.
[7]Maintains course in auto mechanics.

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TABLE I—Continued.

Statistical Report of Manual and Vocational Subjects Taught in California Day High Schools.

Explanation: P indicates that the course is of a prevocational, preparatory, cultural or disciplinary character; V indicates that the course is vocational; S indicates that the course directly supplements a vocation. The number indicates the year the course was introduced.

School and date of establishment	Manual and industrial arts			Household arts		Commercial training for office work	Agriculture, one or more phases
	Wood work	Iron work	Craft work	Science	Art		
Kingsburg, '05						V '07	
Lakeport, '01						V '00	
Lancaster, '12	P '14	P '14		V '15	V '15	V '13	
Laton, '05				V '15	V '15	V '12	V '15
Le Grand, '09	P '12	P '12		V '12	V '12		
Lemoore, '02	P '11			V '15	V '15	V '10	V '15
Lincoln, '07	P --			V --	V --	V --	
Lindsay, '08	P '15			V '13	V '13	V '08	
Livermore, '91				V '10	V '10	V '07	
Lodi, '95	P '13			V '13	V '13	V '10	V '13
Lompoc, '90	P '10			V '10	V '10	V --	V '11
Long Beach[8], Polytechnic, '05	PV '11	PV '11	P '11	V --	V --	V '06	
Lordsburg, '08	P '12			V '12	V '12	V '04	V '11
Los Angeles—							
Classical, '72				V --	V --	V '96	
Gardena, '04	P '11			V --	V --		V '11
Hollywood[9], '03	P '11	P '11		V '08	V '08	V '07	V '10
Lincoln, '13	P --	P --		V --	V --	V --	
Manual Arts[10], '11	PV '10	PV '12	P '00	V '10	V '10	V '14	V '15
Owensmouth, '14				V --	V --	V '14	V '14
Polytechnic[11], '06	PV '05	PV '08	P '09	V '12	V '12	V '95	
San Pedro[12], '08	PV '13	PV '13		V '11	V '11	V '08	
Van Nuys, '14	P --			V '14	V '14	V '14	V '14
Wilmington, '08	P --			V --	V --	V '10	
Los Banos, '97	PV '15			V '14	V '14	V '07	
Los Gatos, '98			P '13	V --	V --	V '15	
Loyalton, '08	*	*	*	*	*	*	*
Madera, '04	P '13			V '13	V '13	V --	
Maricopa, '15	P --			V --	V --		
Mariposa, '14						V '15	
Martinez, '01	P '13				V '12	V '11	
Marysville, '72	P --				V '14	V '15	
Maxwell, '12						V --	
McArthur, '10	#	#	#	#	#	#	#
Merced, '95	P '05			V '13	V '13	V '00	
Mendocino, '92						V --	
Middletown, '14						V --	
Mill Valley, '08	P '13	P '13		V '12	V '12	V '08	
Montebello, '10			P --	V --		V '10	
Modesto, '00	P '12			V '12	V '12	V --	V '15
Monrovia, '93	P '12		P '12	V '10	V '10	V '14	V '14
Monterey, '00	P '14			V '10	V '10	V --	
Morgan Hill, '04				V '13	V '13	V --	
Mountain View, '03	P --			V --	V --	V '10	
Napa, '97	P '12			V '12	V '12	V --	
National, '95	P '11		P '14	V '11	V '11	V '13	
Needles, '02	P '11			V '12	V '12	V '14	

*Reports no courses.

#No report.

[8]Maintains courses in auto mechanics and applied elements of architectural engineering, the latter course introduced 1911.

[9]Maintains course in auto mechanics, introduced 1913.

[10]Maintains the following courses: Vocational drawing, introduced 1900; blacksmithing, introduced 1911; auto mechanics, introduced 1913; printing, introduced 1912; vocational guidance, introduced 1914; supplementary chemistry and applied elements of electricity.

[11]Maintains the following courses: Applied elements of civil, mechanical, electrical, and structural engineering; machine design; blacksmithing; applied elements of mining and architecture; salesmanship; advertising; window dressing; millinery; dressmaking; journalism.

[12]Maintains courses in applied elements of mechanical, electrical and marine engineering.

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TABLE I—Continued.

Statistical Report of Manual and Vocational Subjects Taught in California Day High Schools.

Explanation: P indicates that the course is of a prevocational, preparatory, cultural or disciplinary character; V indicates that the course is vocational; S indicates that the course directly supplements a vocation. The number indicates the year the course was introduced.

School and date of establishment	Manual and industrial arts			Household arts		Commercial training for office work	Agriculture, one or more phases
	Wood work	Iron work	Craft work	Science	Art		
Nevada City[13], '02						V '10	
Newman, '06				V '13	V '13	V '98	
Nordhoff, '09						V '09	
Norwalk, '08			P '11	V '15	V '15	V '10	
Oakdale, '92	P '15			V --	V --	V '10	V '15
Oakland—							
Classical, '67				V '14	V '14	V '15	
Fremont, '05	P --			V '10	V '10	V '06	
Technical[14], '01	PV --	PV --		V --	V --	V --	
University, '14							
Vocational[15], '15	PV '15	PV '15		V '15	V '15	V '15	
Oceanside, '95				V '13	V '13		V
Oleander, '92	P --				V '13	V '04	V '10
Ontario, '11	PV --	PV --		V '09	V '09		V '11
Orange, '08	P '13	P '13	P '13	V --	V --	V '04	
Orland, '95	PV '14			V '15	V '14	V --	
Orosi, '09				V '14	V '14	V '10	V '14
Oroville, '92	P '14		P '14			V --	
Oxnard, '02	P '04			V '13	V '13	V --	
Pacific Grove, '96	P '13		P '13	V '12	V '12	V --	
Palo Alto, '98	P '07		P '07	V '13	V '13	V '11	
Pasadena[16], '92	PV '11	PV '11		V '11	V '11	V '06	V '13
Paso Robles, '93	P '14			V '13	V '13	V --	V --
Patterson, '13	P '14			V '14	V '14	V '14	
Perris, '97	P '11			V '13	V '13		
Petaluma, '73	P '13			V '13	V '13	V '96	
Placerville, '95						V '03	
Point Arena, '04	*	*	*	*	*	*	*
Pomona[17], '89	P '10	P '10		V --	V --	V '98	V '12
Porterville, '96	P '10			V '15	V '15	V '10	V '14
Princeton, '09	P '12			V '15	V '15	V --	V '14
Puente[18], '14	P '15			V '15	V '15	V '15	
Quincy[19], '08					V '15	V --	
Ramona, '06	P '14			V '15	V '15		V '12
Raymond, '15						V --	
Red Bluff, '97	P '08	P '08		V '12	V '12	V '08	
Redding[20], '99	P '09	P '15	P --	V '09	V '07	V --	
Redlands[21], '91	P --	P --		V --	V --	V '15	V --
Redondo, '05	P --			V '10	V '10	V '12	
Redwood City, '95	P '12			V '11	V '11	V '06	
Reedley, '98	P --			V --	V --	V --	
Richmond, '07	P '11	P '11	P '11	V --	V --	V '11	
Rio Vista, '12				V --	V --	V --	
Ripon, '10	*	*	*	*	*	*	*
Riverdale, '12	P '15			V '15	V '15	V --	
Riverside, Polytechnic[22], '11	P '11	P '14				V '11	V '11
Riverside, Girls', '98				V '10	V '10	V '11	
Roseville[23], '12	P '12			V '12	V '12	V --	V --

*Reports no courses.

[13]Maintains course in vocational drawing.

[14]Maintains courses in dressmaking and applied elements of civil engineering.

[15]Maintains courses in blacksmithing; auto mechanics; printing; applied elements of electricity; salesmanship; millinery; dressmaking; machine and architectural drawing.

[16]Maintains courses in auto mechanics and printing.

[17]Maintains courses in salesmanship and vocational drawing.

[18]Maintains course in library craft.

[19]Maintains course in printing.

[20]Maintains courses in applied elements of electricity and civil engineering.

[21]Maintains course in library craft.

[22]Maintains courses in auto mechanics and printing.

[23]Maintains supplementary course in drawing.

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TABLE I—Continued.

Statistical Report of Manual and Vocational Subjects Taught in California Day High Schools.

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School and date of establishment	Manual and industrial arts			Household arts		Commercial training for office work	Agriculture, one or more phases
	Wood work	Iron work	Craft work	Science	Art		
Sacramento[24], '56	PV '14	PV '14	----------	V '15	V '11	V --	----------
Salinas, '82	P '10	----------	----------	V '11	V '11	V '09	----------
San Andreas, '05	----------	----------	----------	----------	----------	V '05	----------
San Diego[25], '87	PV '11	PV '12	PV '12	V '13	V '13	V '00	----------
San Bernardino[26], '91	P '10	P '10	----------	V '09	V '09	V '07	V '15
San Fernando, '97	P '10	----------	P --	V '12	V '12	V '98	V '11
San Francisco—							
Girls'[27], '64	----------	----------	P --	----------	V '09	----------	----------
Commerce, '00	----------	----------	----------	----------	----------	V '00	----------
Lowell, '57	*	*	*	*	*	*	*
Mission[28], '96	----------	----------	----------	----------	----------	V '98	----------
Polytechnic[29], '92	P --	P --	P '95	V '08	V '08	----------	----------
San Jacinto, '95	P '13	----------	----------	V '09	V '09	V --	----------
San Jose[30], '72	PV '08	PV '15	P '09	V '08	V '08	V '04	V '13
San Luis Obispo, '95	P '14	----------	----------	V '14	V '14	V --	----------
San Mateo[31], '02	P '10	----------	P '10	V '11	V '11	V --	----------
San Rafael, '88	P --	----------	----------	V --	V --	V '01	----------
Santa Ana, '89	P --	P --	----------	V --	V --	V --	----------
Santa Barbara[32], '98	P '11	PV '11	----------	V --	V --	V '05	V '15
Santa Clara, '72	P '13	----------	----------	V '13	V '13	V --	----------
Santa Cruz, '76	P '10	----------	P '15	V '09	V '09	V '11	V '10
Santa Maria, '91	P '09	----------	----------	V '13	V '13	V '08	----------
Santa Monica[33], '91	P '11	P ...	----------	V '07	V '07	V --	V '13
Santa Paula, '91	P '06	----------	----------	V '14	V '14	V --	----------
Santa Rosa, '76	P '14	----------	P '14	V '13	V '13	V '09	----------
Santa Ynez, '91	P '14	----------	----------	V '15	V '15	V '11	----------
Sanger, '99	P '08	----------	----------	V '12	V '09	V '00	----------
Sebastopol, '08	P '06	----------	----------	V '15	V '15	V '06	V '15
Selma, '92	P --	----------	----------	V --	V --	V --	V --
Sonoma[34], '91	----------	----------	----------	V '14	V '14	V '07	V '14
Sonora, '03	P '07	----------	----------	V '11	V '11	V --	----------
South Pasadena, '04	P '09	----------	P '09	V '10	V '10	V --	----------
South San Francisco, '13	----------	----------	----------	----------	----------	V '13	----------
St. Helena, '97	P '06	----------	----------	V '13	V '13	V --	V '15
Stockton[35], '70	PV '14	P --	----------	V '14	V '14	V '94	V '10
Susanville, '02	P '14	----------	----------	----------	V '14	V --	V '15
Sutter City, '93	P '14	----------	----------	V '14	V '14	V --	----------
Sutter Creek, '11	P --	----------	----------	----------	----------	V --	V --
Taft, '15	----------	----------	----------	V '15	V '15	V --	----------
Tomales, '11	*	*	*	*	*	*	*
Tracy, '12	----------	----------	----------	----------	V '14	V '12	----------
Truckee, '00	*	*	*	*	*	*	*
Tulare, '91	P '12	----------	----------	V '12	V '12	V '12	V '14
Tuolumne, '11	P --	----------	----------	----------	----------	V --	----------
Turlock, '06	P '12	----------	----------	V '11	V '11	V '11	V '12
Ukiah, '92	*	*	*	*	*	*	*
Vacaville, '93	----------	----------	----------	V '10	V '10	V --	----------

*Reports no courses.

[24]Maintains course in applied elements of electricity.

[25]Maintains courses in auto mechanics; applied elements of electricity and architecture.

[26]Maintains courses in auto mechanics and blacksmithing.

[27]Maintains courses in vocational guidance and millinery.

[28]Maintains courses in dressmaking and millinery.

[29]Maintains courses in applied elements of civil, electrical, mechanical and structural engineering; auto mechanics; supplementary chemistry and physics; vocational drawing.

[30]Maintains course in vocational drawing.

[31]Maintains course in journalism.

[32]Maintains courses in vocational drawing and printing.

[33]Maintains course in auto mechanics.

[34]Maintains course in vocational guidance.

[35]Maintains course in vocational drawing.

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TABLE I—Continued.

Statistical Report of Manual and Vocational Subjects Taught in California Day High Schools.

Explanation: P indicates that the course is of a prevocational, preparatory, cultural or disciplinary character; V indicates that the course is vocational; S indicates that the course directly supplements a vocation. The number indicates the year the course was introduced.

School and date of establishment	Manual and industrial arts			Household arts		Commercial training for office work	Agriculture, one or more phases
	Wood work	Iron work	Craft work	Science	Art		
Vallejo[26], '70				V '11	V '11	V '08	
Venice, '11	P '11	P '11	P '11	V '11	V '11	V '11	V '14
Ventura[27], '89	PV '07			V '10	V '10	V --	V '11
Victorville, '15	*	*	*	*	*	*	*
Visalia, '91	P '12			V '12	V '12	V '06	V '14
Wasco, '15	PV --			V '15	V '15		V '15
Watsonville, '90	P '11			V '09	V '09	VS '96	
Weaverville, '09	P '10					V '10	
Westwood, '14	P '14					V '14	
Wheatland, '07	P '14				V '14	V --	
Whittier, '04	P '10			V '10	V '10	V --	V '10
Williams, '09	P '11			V '13	V '13	V '11	
Willits, '04					V '15		
Willows, '01	P '10			V '15	V '15	V '00	
Winters, '02						V --	
Woodlake, '14						V '14	
Woodland, '95	P --			V --	V --	V --	
Yreka[28], '98	P '10	P '15		V '10	V '10	V '08	V '14
Totals ---- 267	185	46	31	192	204	232	73
Total districts ---- 249	176	41	29	180	191	219	69

*Reports no courses.

[26]Maintains courses in applied elements of civil and structural engineering and electricity; auto mechanics.

[27]Maintains course in vocational drawing.

[28]Maintains course in auto mechanics.

SUMMARY OF TABLE I.

Showing Number of High Schools and Number of Special Courses Established During Each Biennial Period Since That Ending 1894.

Period ending	High schools	Wood work	Iron work	Craft work	Domestic science	Domestic art	Commercial office training	Agriculture
1894	*72						1	
1896	19			1			3	
1898	14						2	
1900	10			1			4	
1902	15						7	
1904	26						4	
1906	17	3					10	
1908	10	6		1	1	2	15	
1910	25	14	6	3	19	19	17	2
1912	21	43	10	7	35	37	31	15
1914	18	36	7	6	52	54	23	14
1916	20	44	12	7	56	63	26	31
Total schools reporting to date	267	146	35	26	168	175	143	62
Totals schools maintaining courses		185	46	31	192	204	232	73

*Established during entire period prior to date.

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TABLE II.

Statistical Report Relating to Manual and Industrial Courses in California Day High Schools.

Explanation: P indicates that the course is of a prevocational, preparatory, cultural or disciplinary character; V indicates that the course is vocational; S indicates that the course directly supplements a vocation. The number indicates the year the course was introduced.

School	Woodwork			Ironwork		Art crafts	
	Bench cabinet	Turning	Pattern making	Forging	Machine shop	Metal	Leather
Alameda[1]	P '12	P '12	P '12	P '14		P '08	P '08
Alhambra	P '11			P '11	P '11		
Alturas	P '14						
Anaheim	P '14						
Anderson[2]	PS '15						
Antioch	P '12						
Auburn	P '12					P '12	P '12
Azusa	P '10	P '10					
Bakersfield	P --		P --	P --	P --		
Benicia[3]	PV '13						
Berkeley[4]	V '09		P '09				P '11
Biggs	P '13						
Bishop	P '15						
Bostonia	P --						
Brawley	P '09						
Brentwood	P --						
Burbank	P '11						
Calexico	P '13		P --				
Campbell	P '12	PS '12					
Carpinteria	P '15						
Cedarville	P '14						
Centerville[5]	P '11						
Ceres	P '14						
Chico	P '11						
Chino	P '11						
Claremont	P '10						
Clovis	P '14						
Coachella	P '13						
Coalinga	P '13						
College City	P '13						
Colton	P '14	P '14			P '14		
Colusa	P --		P --		P --		
Compton	P '09			P --		P --	
Concord	P '13						
Corcoran	P --						
Corona	P '11						
Coronado	P '14	P '14	P '14	P '14	P '14		
Covelo	PS '15						
Covina[6]	P '09	P '09					
Crescent City	P '15						
Crockett	P '13						
Delano	P --						
Dinuba	P '09						
Downey	P '14						
El Centro	P --						
Elk Grove	P '14						
El Monte	P '15						
Escondido[7]	P '10	P '10					
Esparto	P '16						
Etna Mills[8]	PS '15			P '15			
Eureka	P '09						

[1]Maintains courses in foundry, electricity and applied elements of civil engineering.
[2]Maintains courses in concrete work, plumbing and pipe cutting.
[3]Maintains course in applied elements of civil engineering.
[4]Maintains courses in bookbinding, clay modeling and wood block printing.
[5]Maintains course in printing.
[6]Maintains course in plumbing.
[7]Maintains course in blacksmithing.
[8]Maintains course in harness mending.

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TABLE II—Continued.

Statistical Report Relating to Manual and Industrial Courses in California Day High Schools.

Explanation: P indicates that the course is of a prevocational, preparatory, cultural or disciplinary character; V indicates that the course is vocational; S indicates that the course directly supplements a vocation. The number indicates the year the course was introduced.

School	Woodwork			Ironwork		Art crafts	
	Bench cabinet	Turning	Pattern making	Forging	Machine shop	Metal	Leather
Exeter	P '11						
Fairfield	PV '12					P '15	
Fillmore	P '11	P '11					
Fowler	P --						
Fresno[9]	P '12			P '12	P '12		
Fullerton[10]	P '09	P '09		P '09	P '09		
Galt	P '15						
Gilroy	P '12						
Glendale[11]	P '14			P '14	P '14		
Gridley	P --						
Gustine	P '15						
Half Moon Bay	P --						
Hanford	P '14						
Hayward	P --			P --			
Healdsburg	P '11						
Hollister	P '10						
Holtville	P '15						
Hughson	P '15						
Huntington Beach	P '10						
Huntington Park[12]	P '09				P '09		
Imperial[13]	P '09				P '09		
Inglewood[14]	P '14	P '14	P '14	P '14		P '14	P '14
Irwin	P --						
King City[15]	P '14			P '15		P '14	
Lancaster	P '14					P '15	
Le Grand	P '12		P '12	P '12			
Lemoore	P '11						
Lincoln	P --						
Lindsay	P '15						
Lodi	P '13						
Lompoc	P '10	P '10					
Long Beach, Polytechnic[16]	PV '11	P '11	P '11	P '11	PV '11		
Lordsburg	P '12						
Los Angeles—							
Gardena	P '11						
Hollywood[17]	P '09			P '11	P '11		
Lincoln[18]	P --			P --			
Manual Arts[19]	P '10				P '12	P '00	
Polytechnic[20]	PV '05	PV '05	PV '06	P '06	P '08		
San Pedro[21]	PV '13		PV '13	PV '13	PV '13		
Van Nuys	P --						
Wilmington	P --						
Los Banos	PV '15						
Los Gatos						P '13	
Madera	P '13				P '13		
Maricopa	P --						

[9]Maintains course in auto mechanics.
[10]Maintains course in cement work.
[11]Maintains course in concrete pottery.
[12]Maintains course in printing.
[13]Maintains course in automobile mechanics.
[14]Maintains course in pottery.
[15]Maintains courses in farm mechanics, concrete and plumbing.
[16]Maintains course in automobile mechanics.
[17]Maintains courses in foundry and automobile mechanics.
[18]Maintains courses in foundry, electricity and automobile mechanics.
[19]Maintains courses in pottery, printing, automobile mechanics, electricity and blacksmithing.
[20]Maintains courses in applied elements of mining, structural, electrical, mechanical, and civil engineering; architecture; machine design.
[21]Maintains courses in applied elements of marine, mechanical and electrical engineering.

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TABLE II—Continued.

Statistical Report Relating to Manual and Industrial Courses in California Day High Schools.

Explanation: P indicates that the course is of a prevocational, preparatory, cultural or disciplinary character; V indicates that the course is vocational; S indicates that the course directly supplements a vocation. The number indicates the year the course was introduced.

School	Woodwork			Ironwork		Art crafts	
	Bench cabinet	Turning	Pattern making	Forging	Machine shop	Metal	Leather
Martinez	P '13						
Marysville	P --						
Merced	P '05						
Mill Valley	P --	P --		P '13	P '13		
Modesto	P '12						
Monrovia	P '12					P --	
Monterey	P '14						
Mountain View	P --						
Napa	P '12						
National City	P '11					P '14	P '14
Needles	P '11						
Norwalk[22]							
Oakland—							
Fremont	P --						
Technical	PV --		PV --	P --	P --		
Vocational[23]	PV '15		PV --	P '15	P '15		
Oleander	P --						
Ontario	PV --	P --	P --		PV --		
Orange	P '13	P --		P '13		P '13	P '13
Orland	PV '15						
Oroville	P '14					P '14	P '13
Oxnard	P '04	P '04		P '15			
Pacific Grove	P '13					P '13	
Palo Alto	P '07					P '07	
Pasadena[24]	PV '11	PV '11	PV '11	PV '11	PV '11		
Paso Robles	P '14						
Patterson	P '14						
Perris	P '11						
Petaluma	P '13		P '13				
Pomona	P '10		P '10	P '10	P '10		
Porterville	P '10						
Princeton	P '12						
Puente[25]	P '15						
Ramona	P '14						
Red Bluff	P '08	P '08			P '08		
Redding[26]	P '09	P '09			P '15	P --	P --
Redlands	P --				P --		
Redondo	P --						
Redwood City	P '12						
Reedley	P --						
Richmond	P '11		P '11	P '11		P '11	
Riverdale	P '15						
Riverside, Polytechnic[27]	P '11	P '11	P '11		PV '14		
Roseville	P '12						
Sacramento[28]	PV '14		PV '14	PV '14	PV '14		
Salinas	P '10						
San Bernardino[29]	P '10			P '10	P '10		
San Diego[30]	PV '11		P '11	P '12	PV '12	P '12	P '12
San Fernando	P '10					P --	

[22]Maintains course in clay modeling.

[23]Maintains courses in machine design, blacksmithing, auto mechanics, electric wiring and printing.

[24]Maintains courses in printing, machine design, automobile mechanics.

[25]Maintains course in printing.

[26]Maintains course in electricity.

[27]Maintains courses in printing, tool making, automobile mechanics.

[28]Maintains course in electrical construction.

[29]Maintains courses in blacksmithing and auto mechanics.

[30]Maintains courses in electricity, foundry, architecture, clay modeling, cement pottery, book binding and auto mechanics.

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TABLE III.

Statistical Report Relating to Agricultural Courses in California Day High Schools.
X indicates that subject is taught.

School	Date established	Length of course, unit years	Open to grade	Teacher		Practical work		Agronomy or gen. farm.	Animal husbandry	Dairying	Farm mechanics	Horticulture	Plant propagation	Soils	Farm management	Science supplementary	Market gardening
				Form of experience	Certificate	Home	School										
Anderson	1916	½	9-12	Farm	Reg. and spec.	X	X		X								
Arcata		1	10-12	Farm	Reg.	X		X									
Bakersfield	1911	4	9-12	Farm	Reg.	X	X		X	X			X				X
Bishop	1915	4	9-12	None	Reg.	X				X							X
Boonville	1915	1	9-12	Farm	Reg.	X	X	X	X							X	
Cedarville	1914	4	9-12	Farm	Reg.	X	X	X	X	X	X	X		X			
Centerville	1912	4	9-12	Farm	Spec.	X	X	X	X	X							
Chico	1912	4	11-12, ungraded	Farm	Reg.	X		X	X	X		X					X
Crescent City	1915	4	9-12	Farm	Spec.	X	X	X	X	X	X				X	X	X
Dos Palos	1915	1	9-12	Farm	Reg.		X	X		X			X				X
El Centro		1	Ungraded	Farm	Reg.	X	X	X									
Elk Grove	1912	2	9-12	Farm	Reg.	X	X			X		X		X			
Etna Mills	1913	1	9-12	Farm	Reg.		X		X	X	X		X	X			
Ferndale	1913	4	9-12	Farm	Spec.		X	X	X	X					X	X	
Fresno	1909	4	9-12	Farm	Spec.		X	X	X	X	X			X			
Glendale	1911	1	10-12	Farm	Reg.		X	X					X				
Hanford		1	9 and 10	Farm	Reg.		X	X								X	X
Hemet	1915	4	9-12, ungraded	Farm	Spec.		X					X				X	
Holtville	1915	4	9-12	Farm	Reg.	X	X	X	X		X						
Huntington Beach	1911	4	9-12	Farm	Reg.	X	X	X					X				X
Imperial	1909	4	9-12, ungraded	Farm	Reg.	X	X		X	X	X			X	X	X	
Inglewood	1913	3	9-12, ungraded	Farm	Spec.	X	X		X	X	X	X				X	X
Kerman	1914	1	9-12	None	Reg.		X	X	X	X		X					
King City	1913	1	9-12, ungraded	State of Cal.	Spec.		X		X	X	X						
Laton	1915	1	9-12	None	Reg.	X	X	X				X					
Lemoore	1914	1	9-12, ungraded	Farm	Reg.	X	X			X		X		X			
Lodi	1913	4	9-12	None	Reg.		X					X				X	
Lompoc	1911	1	9-12	Dept. Interior	Reg.		X	X					X				
Lordsburg	1911	1	12	Farm	Reg.		X	X				X	X				
Los Angeles—																	
Gardena	1911	3	9-12	Farm	Reg.		X	X	X	X	X	X	X		X		
Hollywood	1910	1	9-12	Farm	Reg.	X	X	X	•	•	•	•	X	•	•	•	•
Lincoln	•	•	•	•	•	•	•	X						X			
Manual Arts	1915	3	9-12	None	Spec.		X	X									

TABLE IV.

Statistical Report of Manual and Vocational Subjects Taught in Intermediate Day Schools That Maintain Ninth Grades.

Explanation: P indicates that the course is of a prevocational, preparatory, cultural or disciplinary character; V indicates that the course is vocational; S indicates that the course directly supplements a vocation. The number indicates the year the course was introduced.

School	Manual and industrial arts			Household arts		Commercial training for office work	Agriculture, one or more phases
	Woodwork	Ironwork	Craft work	Science	Art		
Berkeley—							
Edison[1]	P '16			V '11	V '11	V '14	
Burbank	P '11			V '11	V '11	V '11	
McKinley	P '07			V '07	V '07		
Fresno—							
Longfellow	P --			V --	V --		
Los Angeles—							
Berendo	P --			V '11	V '11	P '11	
Custer	P '11			V '11	V '11	P '11	
Fourteenth Street	P --			V --	V --	P --	
McKinley	P '12			V '12	V '12	P '12	
Sentous[2]	P --			V --	V --	P --	
Thirtieth Street	P --			V --	V --	P --	
Virgil	PV --			V --	V --	P --	
Oakland—							
University							
Pomona—							
Hamilton	P --			V --	V --		
Washington	P --			V --	V --		
Stockton—							
Prevocational[3]	PV --	P --					

[1]Maintains course in printing, introduced 1911.
[2]Maintains course in printing.
[3]Maintains course in printing.

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TABLE VI.

Statistical Report Relating to Manual and Vocational Subjects Taught in Elementary Schools with Grades Above the Sixth, in Cities Having Superintendents.

Explanation: P indicates that the course is of a prevocational, preparatory, cultural or disciplinary character; V indicates that the course is vocational.

City district	Manual training	Household arts		Commercial	Agriculture	Miscellaneous
		Science	Art			
Alameda	P	V	V			
Bakersfield		V	V			
Berkeley	P	V	V	P		P Printing
Chico	P	V	V			
Eureka	P	V	V			
Fresno	P	V	V	P		
Long Beach	P	V	V			P Printing
Los Angeles[2]	P	V	V	P	P	Foot note.
Marysville	P					
Modesto	P	V	V			
Oakland	P	V	V	P	P	
Oroville	*	*	*	*	*	*
Palo Alto	P	V	V			
Pasadena	P	V	V		P	
Pomona	P	V	V			
Richmond	P	V	V			
Riverside	P	V	V			
Sacramento	P	V	V			
Salinas	P	V	V			
San Bernardino[2]	P	V	V			Foot note.
San Diego	P	V	V			
San Francisco	P	V	V	P		
San Jose	P	V	V		P	P Electricity
San Luis Obispo	P	V	V			
San Rafael	P		V			
Santa Ana	P	V	V			
Santa Barbara	P	V	V	P		
Santa Cruz	P	V	V			
Santa Monica	P	V	V		P	
Santa Rosa	#	#	#	#	#	#
Stockton	P	V	V			
Vallejo	P	V	V		P	
Ventura	P		V			
Total 33	30	28	29	6	6	

Of the above 33 school districts one did not report and one reported no courses.
[2]Maintains courses in concrete work, printing and shoe cobbling.
*Reports no courses.
#No report.

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TABLE VII.

Statistical Report Relating to Manual and Vocational Subjects Taught in Elementary Schools in Rural Districts Having Six or More Teachers.

Explanation: P indicates that the course is of a prevocational, preparatory, cultural or disciplinary character; V indicates that the course is vocational.

Rural district	Manual training	Household arts		Commercial	Agriculture	Miscellaneous
		Science	Art			
Alameda County—						
Albany	P --		V --			
Centerville	P --	V --				
Emeryville	P --		V --			
Hayward	*	*	*	*	*	*
Livermore		V --	V --			
Niles	P --		V --			
Pleasanton				P --		Post G. Ele.
San Leandro	P --	V --	V --		P --	
San Lorenzo	*	*	*	*	*	*
Amador County—						
Jackson	*	*	*	*	*	*
Sutter Creek	*	*	*	*	*	*
Butte County—						
Biggs	P --		V --			
Gridley	*	*	*	*	*	*
Colusa County—						
Colusa					P --	
Contra Costa County—						
Antioch	P --		V --			
Carquinez	P --		V --			
Concord	P --		V --			
Martinez	*	*	*	*	*	*
Pinole-Hercules	*	*	*	*	*	*
Pittsburg	P --	V --	V --			
Del Norte County—						
Crescent	*	*	*	*	*	*
El Dorado County—						
Placerville	*	*	*	*	*	*
Fresno County—						
Clovis	P --	V --			P --	
Coalinga	P --					
Fowler	P --		V --			
Fresno Colony					P --	
Kingsburg	*	*	*	*	*	*
Parlier	P --	V --	V --		P --	
Reedley	P --	V --	V --			
Sanger	#	#	#	#	#	#
Selma	P --		V --			
Glenn County—						
Orland	*	*	*	*	*	*
Humboldt County—						
Arcata	P --		V --			
Ferndale	P --		V --			
Fortuna	*	*	*	*	*	*
Imperial County—						
Calexico	P --	V --	V --			
Inyo County—						
Bishop	P --	V --	V --			
Kern County—						
Aztec	*	*	*	*	*	*
Conley	*	*	*	*	*	*
Midway	P --	V --	V --			
Paleto (Maricopa)	P --	V --				
Wasco	P --		V --			
Kings County—						
Corcoran	P --		V --			
Lemoore	P --		V --		P --	
Lassen County—						
Susanville	P --		V --			
Westwood	P --			P --		

*Reports no courses.
#No report.

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TABLE VII—Continued.

Statistical Report Relating to Manual and Vocational Subjects Taught in Elementary Schools in Rural Districts Having Six or More Teachers.

Explanation: P indicates that the course is of a prevocational, preparatory, cultural or disciplinary character; V indicates that the course is vocational.

Rural district	Manual training	Household arts		Commercial	Agriculture	Miscellaneous
		Science	Art			
Los Angeles County—						
Azusa	P --	V --	V --	P --	---	---
Burbank	*	*	*	*	*	*
Claremont	P --	V --	V --	---	---	---
Clearwater	P --	V --	V --	---	P --	---
Downey	*	*	*	*	*	*
Eagle Rock	P --	---	V --	---	P --	---
East Whittier	P --	V --	V --	---	---	---
El Monte	---	---	---	---	P --	---
El Segundo	*	*	*	*	*	*
Glendora	P --	V --	V --	---	---	---
Graham	P --	---	---	---	---	---
Hawthorne	*	*	*	*	*	*
Hermosa Beach[1]	P --	V --	---	---	---	---
Huntington Park	*	*	*	*	*	*
Jefferson	*	*	*	*	*	*
Lordsburg	P --	---	---	---	---	---
Montebello	P --	---	V --	---	P --	---
San Dimas	P --	---	V --	---	---	---
Sierra Madre	P --	V --	V --	---	P --	---
Somerset	---	V --	V --	---	---	---
Tropico	*	*	*	*	*	*
Willowbank	#	#	#	#	#	#
Madera County—						
Madera	P --	---	V --	---	P --	---
Marin County—						
Fairfax	---	---	V --	---	---	---
Kentfield	P --	---	V --	---	---	---
Larkspur	#	#	#	#	#	#
Mill Valley	P --	V --	V --	---	---	---
San Anselmo	P --	---	V --	---	---	---
Sausalito	P --	V --	V --	---	---	---
Mendocino County—						
Fort Bragg	P --	---	V --	---	---	---
Ukiah	P --	---	V --	---	---	---
Willits	*	*	*	*	*	*
Riverside County—						
Banning	*	*	*	*	*	*
Beaumont	*	*	*	*	*	*
Corona	P --	V --	V --	---	---	---
Elsinore	---	---	V --	---	---	---
Hemet	P --	---	V --	---	---	---
Perris	P --	V --	V --	---	---	---
San Jacinto	*	*	*	*	*	*
West Riverside	P --	---	V --	---	---	---
Sacramento County—						
Galt	*	*	*	*	*	*
San Juan	*	*	*	*	*	*
San Benito County—						
Hollister	P --	V --	V --	---	---	---
San Bernardino—						
Chino	P --	V --	V --	---	---	---
Colton	P --	V --	V --	---	---	---
Highland	P --	V --	V --	---	---	---
Mission	P --	V --	V --	---	P --	---
Upland	P --	V --	V --	---	---	---
San Diego—						
Chula Vista	---	V --	V --	---	---	---
East San Diego	P --	V --	V --	---	P --	---
Normal Heights	*	*	*	*	*	*

*Reports no courses.
#No report.
[1]Teaches shoe cobbling.

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TABLE VII—Continued.

Statistical Report Relating to Manual and Vocational Subjects Taught in Elementary Schools in Rural Districts Having Six or More Teachers.

Explanation: P indicates that the course is of a prevocational, preparatory, cultural or disciplinary character; V indicates that the course is vocational.

Rural district	Manual training	Household arts		Commercial	Agriculture	Miscellaneous
		Science	Art			
San Joaquin County—						
Lodi	*	*	*	*	*	*
Tracy	*	*	*	*	*	*
San Mateo County—						
Burlingame	P		V			
Jefferson District	*	*	*	*	*	*
Jefferson-Colusa	*	*	*	*	*	*
Jefferson-Vista Grande	*	*	*	*	*	*
San Bruno	*	*	*	*	*	*
South San Francisco	P		V			
Santa Barbara County—						
Carpinteria	P					
Lompoc	P		V	P	P	
Santa Monica	P	V	V			
Santa Clara County—						
Campbell	P					
Gilroy	P	V	V			
Hester	P	V	V	P		
Los Gatos	P	V	V			
Live Oak	*	*	*	*	*	*
Mayfield	P	V	V		P	
Mountain View	#	#	#	#	#	#
Santa Clara	P	V	V			
Sunnyvale	P	V	V		P	
Sunol	P					
Willow Glen	P					
Santa Cruz County—						
Soquel	P				P	
Shasta County—						
Redding	*	*	*	*	*	*
Siskiyou County—						
Dunsmuir	*	*	*	*	*	*
Solano County—						
Fairfield	#	#	#	#	#	#
Vacaville	P		V			
Sonoma County—						
Sebastopol	*	*	*	*	*	*
Merced County—						
Dos Palos	*	*	*	*	*	*
Los Banos	P	V	V			
Merced	P		V			
Modoc County—						
Alturas	*	*	*	*	*	*
Monterey County—						
Monterey	P	V	V			
Pacific Grove	P	V	V			
Napa County—						
Napa	P	V	V			
St. Helena		V	V			
Nevada County—						
Grass Valley	P	V	V			
Orange County—						
Anaheim	P	V	V		P	
El Modeno	P	V	V			
Fullerton	#	#	#	#	#	#
Garden Grove	#	#	#	#	#	#
Huntington Beach	P	V	V		P	
Olinda	P		V			
Placentia	P	V	V			
Randolph District (at Brea)	P		V			
Tustin	P		V			

*Reports no courses.
#No report.

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TABLE VII—Continued.

Statistical Report Relating to Manual and Vocational Subjects Taught in Elementary Schools in Rural Districts Having Six or More Teachers.

Explanation: P indicates that the course is of a prevocational, preparatory, cultural or disciplinary character; V indicates that the course is vocational.

Rural district	Manual training	Household arts		Commercial	Agriculture	Miscellaneous
		Science	Art			
Placer County—						
Auburn	*	*	*	*	*	*
Lincoln			V		P	
Roseville	P			V		Post G. Eve.
Stanislaus County—						
Bonita	*	*	*	*	*	*
Ceres	P	V	V			
Denair	P				P	
Hughson	#	#	#	#	#	#
Newman		V	V			
Oakdale	P		V		P	
Patterson	P	V	V		P	
Sutter County—						
Yuba	*	*	*	*	*	*
Tehama County—						
Corning			V			
Red Bluff		V	V			
Tulare County—						
Dinuba	P		V			
Exeter	P	V				
Lindsay	P	V	V			
Porterville	#	#	#	#	#	#
Tulare	*	*	*	*	*	*
Tipton-Lindsay	P	V	V			
Tuolumne County—						
Sonora	*	*	*	*	*	*
Summerville	P					
Ventura County—						
Fillmore	#	#	#	#	#	#
Oxnard	P		V			
Santa Paula	P	V	V			
Yolo County—						
Winters	*	*	*	*	*	*
Yuba County—						
Marysville	P		V			
Total 169	99	55	92	5	23	

*Reports no courses.
#No report.
Of the above 169 schools 11 did not report and 40 reported no courses.

VOCATIONAL TRAINING IN EVENING SCHOOLS.

For many years two evening high schools of this state have been devoting themselves to the problem of providing an education that would meet the occupational needs of the men and women workers of their respective communities. The Humboldt school of San Francisco, established 1897, and the Polytechnic evening school of Los Angeles, established 1906, have from the first sought to maintain courses of instruction that would either prepare students directly for vocations or supplement the training they were receiving as apprentices or journeymen workers. Most of the other evening schools, secondary and elementary, have up to the last two or three years concerned themselves only

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with the common branches of the elementary school, and have therefore generally ministered only to the needs of the illiterate of their communities. Within the last three years the evening schools generally have expanded their programs by introducing household arts, commercial, and industrial courses.

A few years ago when the new student entered the evening school he was assigned to an arithmetic, writing, reading, or grammar class, regardless of his educational qualifications and his real needs. Even later when science, drawing and certain of the manual arts had been introduced, the courses provided in these subjects were of an elementary and scholastic character only, and no attempt was made to connect the work with the immediate need of the student. Today the modern evening school considers this need and provides class or, when necessary, individual instruction which either supplements the experience of the worker or prepares him for an occupation.

The facts set forth in Table V, page 23, will give some notion of the development of evening schools in recent years. Unfortunately the reports from certain of them were incomplete; from others we received no reports whatever. In all probability some of the small evening schools of the state are omitted from this table.

Certain of these schools reported as elementary schools. No doubt some of them maintain elementary courses for the illiterate, but they also maintain courses of advanced character which directly supplement the different occupations of the adults of the various local communities. These are by their very nature secondary and not elementary school courses.

The subjects listed in Table V only partially show the courses of a vocational character or the courses supplementing vocations which are at present maintained.

In the woodshop, apprenticed carpenters, pattern makers, cabinet makers, wheelwrights, and other woodworkers are given training.

In the machine shop courses men are registered who are employed in iron works, in ship building yards, in engine works, in machine works, and in tool, automobile and other factories.

Under the caption "office work" a large number of subjects relating to clerical, secretarial or accounting service are maintained for men and women employed in these fields.

Besides training individuals for service as draftsmen, the courses in drawing supplement the practical experiences of men and women in almost all of the common industrial fields where skill is required. In these courses we find carpenters, pattern makers, mill men, plumbers, tinners, plasterers, painters and decorators, ironworkers, dressmakers, milliners and home makers.

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The applied science courses relate directly to industrial, agricultural and household occupations. They are attended by electricians, designers, builders, machinists and industrial workers from many fields, gardeners, farmers and housewives.

The large and well organized schools rarely allow a prospective student to leave. The courses are usually administered with the idea that they must meet the needs of students of various occupations and with various interests. The instruction is largely individual and by the project or task method, so that it is usually not difficult to meet the needs and desires of the various applicants.

MANUAL TRAINING, AGRICULTURAL, HOUSEHOLD AND COMMERCIAL SUBJECTS IN THE SEVENTH AND EIGHTH GRADES OF ELEMENTARY SCHOOLS.

City Districts.

Table VI, page 24, contains a statistical report on this subject for cities employing superintendents. Questionnaires were sent out to all schools in these districts maintaining seventh and eighth grades. Reports were received from all but one of the 33 cities. Of the 32 remaining, one only reports no courses. Thirty report manual training, 29 report household art, 28 report household science, 6 report typing and 6 report agriculture.

The manual training and household science and art courses are required of all pupils. The typing is maintained only in certain schools in the district and is elective. The agriculture is required in some of the schools where it is maintained and is elective in others.

The manual training course usually consists solely of bench work in wood, though in a few instances art craft subjects and cement work are given. Most of the courses lead to simple cabinet work; however, in a few instances constructive work in mechanical problems is emphasized. Freehand sketches or mechanical drawings, or both, are required before the pupil is permitted to go to work upon his project.

The household science and art courses are usually confined to cooking and sewing (garment or dressmaking of a simple character), although some of the larger cities provide courses in food service, in the care of the home, in household accounting, in millinery, and, through their drawing departments, in the study of home architecture and home decoration.

The courses in typing are, strictly speaking, not commercial courses, but English composition courses. They serve, however, as prevocational courses for many of the pupils.

The agricultural courses in the city schools are usually practical courses in school gardening. Only six of the city departments reported courses, and while some others maintain the work, a majority of them make no provision for the same.

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Rural Districts.

Table VII, page 25, contains a statistical report on this subject from all elementary schools in rural districts, employing six or more teachers. The same kind of questionnaire was sent to these schools as was sent to those in city districts. Reports were received from all but 11 of the 169 schools of this character. Of the 158 remaining, 40 reported no courses. Ninety-nine schools, or 62 per cent of those reporting, maintain courses in manual training; 92, or 58 per cent, maintain courses in domestic science; 23, or 15 per cent, maintain courses in agriculture.

The courses given in this type of rural school are quite like similar courses given in city schools. They are, of course, less comprehensive in scope; and while the laboratories and equipments are as a whole inferior to those of the cities, the opportunities for practical applications are usually better in the country districts. Practically all of the instruction in city schools is given by specialists in the various fields, while many of the courses in the country schools are conducted by the regular teachers.

As pointed out above, but 15 per cent of the rural elementary schools maintaining six or more teachers give instruction in agriculture, and perhaps not more than 25 per cent of the city schools give such work. This is rather surprising when we take into consideration the fact that for nearly ten years the law has required that "nature study with special reference to agriculture" shall be taught in each such elementary school in the state. Without doubt the people of the state are favorably inclined toward such instruction or they would have repealed the act long ago. Clearly, the only reason that agriculture is not taught in more schools is that the teachers are not qualified to handle it successfully. This condition your honorable body has already taken steps to remedy by requiring of all who may graduate from normal schools after January, 1919, a practical knowledge of the subject. In this connection, you should be looking forward to taking the steps necessary to insure that all of the teachers in the service shall ultimately qualify in this subject. In the state of Wisconsin all teachers in the service were by law required to qualify in agriculture before a certain specified date, and I understand that the act has been rigidly enforced. The state established a system of vacation schools to provide opportunity for the teachers to qualify.

To sum up, it may be stated that in city schools the manual training and household arts courses are almost as much a part of the curriculum of the elementary school as are any one of the traditional subjects, while a rural elementary school with six or more teachers is not considered up to date unless it maintains both of these subjects.

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Very few rural schools with but one or two teachers offer courses in the so-called special subjects, and, perhaps, this is as it should be, since the teachers of the one- and two-room schools could not, as a rule, find time to do justice to both special and regular subjects. Occasionally the pupils of a one-teacher school may be accommodated in two or three grades. The teacher in this case may be able to find time to handle the work, but she is rarely qualified to do so. It would be a rare teacher indeed who could teach satisfactorily music, drawing, manual training, household arts, agriculture and all of the common school branches to the children of the upper grades.

Experience has shown that the best results in the special branches in these grades can be secured only by employing special teachers. This being the case, satisfactory results in certain of these special lines can never be secured in the grammar grades of the rural schools until provision is made for departmental instruction through consolidation. The one- and two-room rural school grew up in response to a need for education in frontier communities. The frontier has in most instances moved on, but this type of school remains as an inheritance to confound those who would as far as possible provide a uniform modern education for all of the children of the commonwealth.

MANUAL AND INDUSTRIAL ARTS.

Descriptive Statement.

The time given to manual training in the elementary schools ranges from one to three hours per week, but in a majority of schools it does not exceed one and one-half hours per week. The woodworking courses in high schools range from one-half unit to four unit courses, a unit course representing about one-fourth of the pupil's time for one year; and the ironworking courses, exclusive of the purely vocational subjects taught in this division, rarely exceed two units in length. As a rule, two successive periods of from forty to fifty minutes each are devoted daily to shop work. In a few schools the work has been arranged so as to provide laboratory periods of from two to three hours each.

As mentioned elsewhere, the manual training courses in the grades are largely confined to bench work in wood directed toward cabinet making. This type of work carried to a more advanced degree prevails also in most of the high schools of the state. However, in these schools the hand work is frequently supplemented by the use of machinery. In the high schools where the courses exceed one unit in length, wood turning is usually included, and in many of the larger city schools pattern making courses are provided. In several of the schools where ironworking courses are maintained, courses in molding are also given.

Metal, leather and clay art craft courses are given in certain of the

high schools of the state, but only two or three high schools give all of these courses. The introduction and maintenance of such courses appear to hinge upon the question as to whether any teacher in the department can handle them.

The courses in ironwork, when complete, consist of machine shop practice, including the use of drill press, lathe, shaper, planer, etc., forging and sheet metal work. Only the larger schools in the cities maintain all of these courses. In many places the work still consists merely of a series of exercises planned to give the student experience in the use of tools and the operation of machinery.

The equipment in the different schools varies greatly, ranging from the possession of one or two forges to a shop equipment superior to that of any commercial ironworking shop in the community. A number of the rural high schools that maintain agricultural courses have each added one or two forges and a drill press to the usual woodworking equipment, thus making it possible to provide a complete course in farm mechanics.

While, as pointed out above, many of the high schools of the state still cling closely to cabinet work in their woodworking courses, and exercise work in their ironworking courses, others are breaking away from these traditional forms and are trying to industrialize truly their work in these departments.

In certain high schools in rural districts the manual training courses include building construction of a rough character. Practical work of an elementary character in carpentry, cement, plumbing, painting and tinning is provided. The pupils, under the supervision of the teacher, plan and build laboratories for manual training and household arts, lath houses and hothouses for agricultural purposes, and in some instances dairy barns and other farm buildings for neighboring farmers.

In the city high school the wood working department is beginning to resemble closely the cabinet department of a planing mill. The work is being conducted on a strictly commercial basis, and the product of the shop is being utilized in the buildings of the school department.

In the same manner the molding, forging and machine shop departments are beginning to turn out a product that has commercial value.

Aim of Manual Training.

Clearly, the aim of a manual and industrial course is either prevocational or vocational. If prevocational it should be a general course, touching as many industrial occupations as possible, giving actual experience in as many of the major skilled occupations as conditions will permit, and providing opportunity to study all others indirectly through observation and description provided by visits to industrial plants, by moving pictures and by reliable books—all interpreted

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through the aid of an intelligent teacher. If vocational it should be a special course, specific rather than general in character, and designed to prepare for a particular occupation open to and attainable by the pupils whom it may attract.

It is quite evident that the same course of instruction can not be both prevocational and vocational. Any attempt to serve these two ends in a single course will invariably defeat both purposes. However, whether the aim of a course be vocational or prevocational, the more practical the work is made, the more it squares up with the customs of the industrial world, the more valuable it will be to the pupil.

While all now agree that the function of this work in the elementary school is prevocational, few, if any, courses have been modeled upon this principle; and while there is also full agreement that most children are not sufficiently developed to acquire much hand skill before the age of fifteen, yet most manual training courses for elementary schools are governed alone by the idea of developing hand skill.

The manual training courses in elementary schools should be converted into industrial study and practice courses, the purpose of which should be to study the various industrial occupations and, as far as possible, to offer opportunities to the pupils to participate in such constructive work as can be readily handled in and about the school. The practical work should be of a real constructive character and should cover as many fields of activity as possible. The building trades offer the best opportunities for suitable practice work.

This plan could be followed to advantage by certain of the high schools, since the work in these is in many cases also intended to be prevocational in character.

HOUSEHOLD ARTS.

As previously stated, the household arts courses in the elementary schools are largely confined to courses in cooking and sewing. In a majority of the schools the sewing is given in the sixth and seventh years or in the seventh year alone, and the cooking is given in the eighth year. The time devoted to the work ranges from sixty to two hundred minutes per week, with ninety minutes the prevailing time. The daily periods for sewing are never less than forty minutes long and for cooking never less than sixty. The favorite laboratory period both for sewing and cooking appears to be ninety minutes.

In the high schools the household arts courses range in length from one to four or five units—each unit representing approximately one-fourth of the pupil's time for one year. Where but one or two units of work are given in the science and art work, the time is usually equally divided between cooking and sewing, though in some instances other

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subjects are taught. A laboratory period in this subject generally consists of two successive recitation periods, or approximately ninety minutes per day.

A majority of the schools confine the work to courses in sewing and elementary dressmaking and in cooking. Where three or more units of work are provided, the course usually includes a part or all of the following subjects: Home cooking, food service, invalid cooking, home marketing, general sewing and textiles, dressmaking, millinery, dress and millinery designing, house planning, interior design and decoration, house furnishing, shopping, home gardening including floriculture and kitchen gardening, housekeeping, laundering, home nursing, household sanitation, household accounting, dietetics, household chemistry and child study.

It was the intention to report in detail upon the various topics covered under the household arts courses in each of the high schools of the state, but the reports received were not sufficiently detailed for this.

The development in this field of work has been remarkable. Reference to the Summary of Table I, page 15, shows that the first of these courses was introduced during the biennial period ending 1908, and that since that time the increase has been constantly greater each succeeding year. At present 72 per cent of the 267 day high schools of the state have introduced domestic science and 76 per cent domestic art work. The 63 high schools that do not maintain courses in domestic art and the 75 that do not maintain them in domestic science are mostly schools with from two to five teachers only. The summary shows that these courses are considered a necessary part of the high school curriculum in this state and that they would probably be universally adopted if the teacher problem could be solved.

The reports show that the expansion of the content of the courses has also been remarkable, particularly in the last two years. Many of the teachers of this subject are interesting themselves in the community life of their various districts and are adjusting the course to the home needs of their pupils.

COMMERCIAL COURSES.

Descriptive Statement.

Of the 232 high schools maintaining commercial courses, 143 reported the dates upon which the courses were introduced. The earliest date reported was for Fairfield, which introduced the work in 1893. For the first decade the development was relatively slow. The reports submitted show that 21 of the 156 high schools existing at the end of the period had established departments; and while complete figures would show a larger number of courses existing, those submitted show that the great development occurred at a later period. From that time, 1904, until

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1912 the development of the subject was very rapid. The report shows that the greatest number of departments was established during the biennial period ending 1912. Since that date the number of new departments established has each year approximately doubled the number of new schools established during the same period. At the present time 87 per cent of the day high schools of the state maintain these courses.

While some difficulty is encountered in handling the teacher problem in the small high schools, it probably gives less trouble in this than in any of the other special fields. The reason is that the regular high school teacher can in a manner equip himself in the technique of this subject in a much shorter period than would be possible in any other special line of work. This is due largely to the fact that the background subjects and the subjects supplementing the technical courses in the commercial fields covered are at least, to some extent, a part of the equipment of almost every high school teacher.

Commercial courses, in so far as they apply to high schools and business colleges, as a rule provide only preparation for clerical office positions. The applied courses include merely the subjects of stenography, typing, bookkeeping and general office work. In the high schools such courses are usually supplemented by courses in commercial law, including legal forms; commercial and industrial history, commercial and industrial geography, commercial arithmetic, commercial English, business correspondence, spelling and writing. In some instances Spanish or German is required. The other subjects selected to complete the course are United States History and English and elective subjects.

The courses range from one to four years in length, those of two years being most common. Where the work is given in one year it usually takes the entire time of the pupil. The most comprehensive courses require about one-half of the pupil's time for four years. While some of the schools will still permit any pupil who has successfully completed the eighth grade work to take the commercial course in one or two years, as the case may be, these individuals rarely succeed in securing and holding positions. *Upon the whole it may be said that the commercial courses in the high schools of this state are four years in length.*

The high schools have been more successful in preparing for office work than for any other occupation. Generally speaking, the courses preparing for such work have been well planned and the instruction has been good.

It is true that business men often find fault with the preparation of those who complete these courses, but the weakness of the product is rarely due to faulty instruction; rather it is due to individual unfitness for the work. Outside of the household arts course this is the only course of a truly vocational character commonly maintained in the high

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schools of the state. When a student decides that he must prepare in high school for some money-producing occupation he has but this one course open to him. As a result he frequently takes it when he is not fitted for it either by nature or by training. Other students elect the work in order to avoid the foreign languages, mathematics or science required in the university preparatory courses.

The stenographer, typist or secretary must be rapid and accurate, must have an unusual command of the English language and must be generally intelligent. The bookkeeper and accountant must be able to perform the four fundamental operations in arithmetic rapidly and almost as accurately as a machine; he must be systematic and he must be intelligent. In fact, only the best English students should select an occupation such as stenography and typing or secretarial work, and only the most systematic should undertake bookkeeping.

The teacher in the commercial department knows full well that many of his students should have selected some other occupation than the one for which they are preparing, but he hesitates to eliminate them because elimination from the department usually means elimination from school. He recognizes that the high school belongs to the people and that it is for the benefit of all of the children and not for the benefit of the few, and that so long as a pupil does his part the best he can he must be given an opportunity. Thus at the end of the course many are turned out who will never be able to qualify for the particular occupations for which they have prepared; but nevertheless they have secured a high school education which will probably fit their particular situation much better than would a university preparatory course.

The 232 commercial departments of our high schools are turning out each year prospective stenographers and typists and bookkeepers by the thousands. Statistics gathered by a prominent typewriter company two years ago showed that the average wage for beginners in stenography and typing in San Francisco was less than eight dollars per week.

Admitting that the graduates of the commercial department of our high schools are not always competent and admitting that these departments are greatly overstocking the market, the fact remains that they by their more liberal requirements are enabling thousands of young people to secure a secondary education.

Many of the commercial courses maintained by our larger high schools provide, for those who are planning to complete their training in the high school, a much better liberal education than is provided by the usual university preparatory courses. A good commercial course is characterized by the emphasis it places upon English, commercial and economic history and geography, and commercial law, including certain

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legal procedure and legal forms of a commercial character. Where a modern language is required it is taught from the oral standpoint and, in reading and writing the language, emphasis is placed upon the modern commercial aspect of the subject.

A liberal education is characterized by its breadth of application to the affairs of life. A university preparatory course is, by its very nature, narrow and incomplete; therefore it can not serve the purpose of a liberal training until it is applied in a higher institution. If it is never so applied much of it is waste.

Commercial Courses Need Expansion.

Viewed from a vocational educational standpoint, the commercial courses are entirely too narrow in their scope to meet the needs of the present day. The last census report shows that nearly a third of the working population of this state is engaged in commercial pursuits and clerical work other than that connected with commercial enterprises. Of these the number engaged in actual clerical office work is very small compared to the whole. A large number of those engaged in commercial enterprises are directly engaged in the business of barter or trade, and yet but three high schools in the state maintain courses that prepare for this work.

Most of those who complete the commercial course in a high school, if they find employment in this field, engage in salesmanship. For this occupation they have had no definite preparation and their previous training contributes only indirectly to their efficiency in this line. In addition to these, thousands of other young people are entering this line of work, recruited partially from those who have completed a general high school course, but mostly from those who have had little or no high school training.

So far the courses in salesmanship in this state have mostly dealt with the subject of barter, general service, and the technique of the floor system in mercantile establishments. The study of commodities has received but slight attention and there will perhaps be little development in this subject until this is remedied.

The study of clothing, fabrics, house furnishings, machinery and implements, foodstuffs, the production of the raw materials from which they are developed, their manufacture and distribution, their relative costs and their relative service values, should constitute the foundation work for courses in salesmanship in any one of these lines.

Since so many of the girls of our cities who have to work outside of their homes find their way into establishments that handle clothing and foodstuffs, we should be looking forward to establishing practical courses in salesmanship open to girls over fifteen years of age. These should be largely laboratory courses supplemented by visits to manufacturing and

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distributing establishments, by observation of agricultural and manufacturing processes through moving pictures and by readings. The theoretical subject of service through salesmanship, the psychology of barter and the technique of store service should be taken up only after the individual has learned something of the commodities she expects to handle.

Such courses would relieve our present commercial departments of caring for many pupils now attempting to prepare themselves for an occupation which they are not fitted by nature and experience to enter, pupils who are taking the work only because the high schools offer them no other courses that prepare for a vocation. They would also open the doors of opportunity to thousands of girls in this state who can not or will not qualify for any of the courses maintained in the high school at the present time. When we have established such courses and through experience have refined them to satisfactory service, then we should expand the work to include preparation for salesmanship in the other lines mentioned above.

AGRICULTURAL COURSES.

Descriptive Statement.

Two years ago sixty high schools reported agricultural courses, but investigation showed that almost half of these consisted of one elementary course in agricultural chemistry or agricultural botany alone. Only thirty-three of these schools gave practical courses in the subject.

A careful survey of the situation made this year shows that 73 high schools are attempting to maintain practical courses in one or more phases of the subject. Table III, pages 20–21, gives a detailed analysis of these courses. It was compiled from the reports received from the various schools, and perhaps some omissions may have occurred. However, the table shows in general the content of the agricultural courses in the high schools of this state.

Of the 73 schools listed 62 reported the dates upon which the courses were introduced. These dates are segregated in the Summary of Table I, page 15. According to the reports received, the first courses were introduced in 1909. During the biennial period ending 1912 fifteen additional schools introduced the work, and during the following biennial period 14 schools were added, while during the last biennial period 31 schools reported the introduction of courses. *In short, the report shows that the first courses were introduced but seven years ago, that there has been a constant increase since that time, and that the number of courses doubled during the last biennial period.*

It is interesting to note that 5 of the 72 schools maintaining courses are located in the Los Angeles City District, mostly in the recently annexed sections of the city.

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The agricultural courses in high schools range in length from one-half to four years, and cover from one to six subtopics, such as general farming, animal husbandry, dairying, horticulture, farm management and market gardening.

Four schools admit only pupils who have completed at least one year of the high school course; while the remainder admit pupils from all of the high school grades. Fourteen of the 73 schools also admit pupils to these courses on maturity qualification, such pupils not having satisfactorily completed the eighth grade work.

Of the 73 schools 19 employ teachers who hold special certificates in agriculture, 52 employ teachers with regular certificates, 2 employ teachers with both special and regular certificates, and 2 schools fail to report on this item.

One school employs a teacher who has had experience with the horticultural department of the state, 2 employ teachers who have had experience with the Department of the Interior, 53 employ teachers who have had farm experience, and 9 fail to report.

The farm experience ranges from that gained during vacations while attending high school to several years of farm experience obtained after completing the university course.

Thirty-six schools report that the pupils are required to do practical work both at school and at home, 30 that they are required to do practical work at school only, 3 that they are required to do practical work at home, and 14 do not report.

The amount of practical work required varies greatly in different schools. In some places it is confined to the work attendant upon experimental field courses, in others actual farm work is conducted on the school farm or at home. In some schools the amount of practical work required depends upon the previous experience of the individual pupil. As in most vocational courses, the tendency is to slight the practical aspect in an attempt to cover a wider theoretical field.

Forty-seven schools report general farming courses; 28, animal husbandry courses; 23, courses in dairying; 30, courses in horticulture; 13, courses in market gardening; 15, courses in plant propagation; 15, courses in the study of soils; 13, special science courses (agricultural chemistry and botany) supplementing agricultural work; 9, farm management courses; 16, courses in farm mechanics; and one reports a course in viticulture.

A few of the schools did not submit detailed reports and undoubtedly in some cases courses were not reported because they are given only during alternate years.

The rapid growth of agricultural courses in high schools since their first introduction seven years ago is conclusive evidence that the people of the state desire this type of education. In many instances the work

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where introduced has not proven entirely satisfactory even to those most interested, and yet, with few exceptions, the people of the various communities have clung to the subject with a determination to solve the problem and thus to place it upon a more satisfactory basis.

Many of the schools that desire to introduce the work have been hindered from doing so because of inability to solve the teacher problem. Very few teachers holding regular certificates have had the necessary special training to handle the work properly, while the teachers holding special certificates may not under the law teach any subjects other than those enumerated in their certificates, nor may special teachers be certificated in subjects other than certain specified special subjects.

Admitting that it is desirable to have the special subjects taught by teachers with special training, it is difficult to see how a high school that employs four, five or six teachers can maintain satisfactory special courses in agriculture, household arts, manual training or farm mechanics, drawing and art, music, and the necessary courses in language, science, mathematics, etc.

There were last year in this state 48 day high schools that employed four or less teachers each, 27 that employed five teachers each, and 34 that employed six teachers each, making a total of 109 schools that employed not to exceed six teachers. These high schools are for the most part located in rural districts where the special courses are most needed.

Very few of the special teachers of agriculture are qualified to teach farm mechanics. This is unfortunate, since it usually necessitates the employment of a special teacher of manual training to carry on this work.

Agricultural Courses Not Entirely Satisfactory.

As suggested above, the agricultural courses have not always proven successful where they have been introduced. In fact, it is doubtful if the school authorities of any school maintaining the work are entirely satisfied with the result they have obtained. This is not, however, surprising since every subject to be found in the curriculum of the school had to pass through a period of experimentation before it could be properly adjusted to the need of the community and the pupil. These considerations lead me to venture certain criticisms and suggestions relative to these courses.

In the first place, we have in the past usually attempted to organize these courses in such a manner as to meet the entrance requirements of the university. This means that we have tried to prepare the boy both for the university and for the vocation of farming, in four years, the minimum time requirement for university preparation alone. This is, of course, an impossibility since the character of the work demanded by

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the university is entirely different from that necessary in preparing for the vocation.

The university, which is itself a vocational school, demands a theoretical education which is more or less general in character, and reserves for itself the function of utilizing this training as a foundation for the special practical work which it expects to give in preparing the student for any particular occupation. On the other hand, a high school course in agriculture, if it is designed to be a vocational course the function of which is to prepare young men for farming, must be a practical non-technical special course. Such a course must place most emphasis upon the farm work, and must require a mastery only of such technical subjects as are essential to a reasonable understanding of the same.

The agricultural courses, like most others, were first worked out in the special colleges and in the universities. These courses have therefore been adjusted from the social standpoint to the needs of the professional agriculturists and from the student standpoint to the needs of persons of college age and grade. When the high schools first introduced the subject, there being no other courses worked out, they naturally tried to adapt the college courses in agriculture to high school needs. In this they have failed; first, because these courses include the wrong subjects; and second, because the pupils do not have the necessary maturity and preparation to handle them properly.

The principal function of the agricultural course in the university is so radically different from that of the agricultural course in the high school that both the content of the subjects taught and the method of instruction must also be radically different.

Suggested Changes in Agricultural Courses.

The agricultural courses in our high schools have too largely resolved themselves into courses in science taught agriculturally. What we need in these schools are courses in farming taught scientifically. The product of the high school course in farming should bear the same relation to the technically trained agriculturist as the trained nurse bears to the physician. It is the function of the agriculturist to diagnose and prescribe; it is the business of the farmer to administer his farm and to nurse plant and animal life.

The idea that it is not the business of the school to provide for and require practical farm experience in connection with the agricultural course has almost entirely disappeared. However, the farm experience provided is usually either co-operative work in experimental farming or crop raising on the school farm, or unsupervised work at home, or both. Rarely is the pupil required to conduct such work upon a commercial basis.

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It is not a matter of great importance whether the practical experience is secured on the school farm or elsewhere. It is, however, all-important that the work shall be handled by the pupil as a commercial project. A school farm is a very desirable but not a necessary adjunct to an agricultural course in a high school. The main purpose of such a farm should be to provide opportunities for model demonstrations in crop raising and for plant and crop experimentation. Where the school farm is large it can be utilized also for pupils' projects.

In Massachusetts the vocational agricultural schools require each pupil to carry at least one agricultural project through each year course. This may be an undertaking such as the raising of a crop of potatoes or grain; the care of a certain number of fruit trees or vines, a garden plot, a bunch of dairy cows or swine, a dozen or more chickens, turkeys, ducks or geese, or a number of hives of bees. The work is conducted upon a strictly business basis, the pupil charging against the project land or other rental, and the expenditures for fertilizer, feed, or labor, as the case may be. He markets the product and balances the receipts against the expenditures for operation. In most instances the boy rents the land or stock from his parents, though in some cases he rents from the school, in others from strangers. The work is all conducted under the direct supervision and guidance of the teacher of agriculture who spends about one-half of his time going from farm to farm to advise with his pupils and their parents. The pupil spends approximately one-half of his time in practical work.

Agricultural courses established on the project plan should give about one-half of the time to the project work plus farm mechanics, and the other half to theoretical agriculture, including experimental agriculture, science, mathematics, English and citizenship.

As at present maintained, our agricultural courses do not appeal to the boy who will probably become the farmer. The present technical agricultural courses can be handled satisfactorily only by such individuals as are interested in the usual college preparatory work. *We lose from our high schools the boys who are vitally interested in immediate money returns for their work. The main difference between this type of boy and the other is that these individuals develop this trait a little earlier; indeed, it sometimes means that they represent a class of individuals who feel more keenly the responsibilities of life than those who go along thoughtlessly accepting educational opportunities from the state and support from their parents or others as a natural part of their experience.*

Agriculture is perhaps the only large industry that thrives best when administered by individual workers. On the other hand, the corporation has largely supplanted the small independent manufacturer and business man. In these fields the individual has been supplanted largely

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because the service can probably be better performed by co-operative action. On the contrary, farming on a large scale has almost uniformly proven a failure.

This affects profoundly the vocational situation as it relates to agriculture. A young man completing an industrial course in a secondary school may, in a short time, engage himself as a worker in the industry at a living wage. Not only this, he is usually in line for promotion and he may ultimately arrive in his profession or other occupation without having invested any capital other than brains and muscle. *On the other hand, the young man who completes a high school course in agriculture, if he would make use of his vocational training, must either engage himself as a hired man, a situation which does not pay a living wage and which leads nowhere, or he must establish himself as an independent farmer.* Regardless of the amount of training that he may have had in the subject of agriculture, he can not succeed as an independent farmer unless he knows thoroughly the business of farming. If he knows this, and in addition thereto knows the science of farming, he can command sufficient capital to finance any reasonable undertaking along agricultural lines which he desires to enter. As a matter of fact, opportunities for young men who know the business of farming as well as the science of farming, go begging in every agricultural district in the state of California.

If the above contention is true, then the method which we have pursued in our high schools in training for farming has, as a rule, not been the right one. If the business of farming is absolutely essential to success, then it should be the first consideration in the training of our boys for farm work. There is only one way you can be assured that an individual has been trained in the business of farming and that is to have him, while under instruction in the high school, engage in the business of farming. This experience can be secured only through the project method of instruction. If a strict accounting is made of everything that goes into the project, as well as everything that comes out of the same, and if this accounting is conducted on a common sense, practical basis, then at the end of the school course the youth, his parents, the school authorities and the community will know whether or not he can make a commercial success of farming. If the people of the community, as well as the parents, know that he can make a commercial success, he will have no trouble in securing the necessary financial assistance to establish himself in his occupation.

The conditions in this state are ideal for the development of home project agricultural courses. We have more than two hundred high schools located in agricultural communities; we have good roads; and we have, in these same agricultural communities, thousands of boys out of school who are over fifteen years of age.

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VOCATIONAL GUIDANCE.

During recent years much interest has been aroused in this state in vocational guidance. For three years the University of California has maintained courses in this subject in its summer sessions. Meyer Bloomfield, of Boston, lecturer and author in this field, conducted the work for the first two years. Last summer Mr. Jacobs, of San Jose, handled it.

The activities of these and many other interested individuals have aroused teachers and parents alike to a full realization of the importance that should be attached to choosing an occupation. In short, vocational guidance as a propaganda has swept the state. On the other hand, vocational guidance as a practical subject is in its infancy. In a few of the largest high schools guidance experts are employed to counsel with the pupils on future plans. In some of these schools courses are given in life career study and in educational guidance.

Vocational guidance when applied to one attending school always involves educational guidance. Perhaps the person who anticipates securing a thorough school preparation is more in need of guidance than the individual who stops school at fifteen or sixteen to go to work. There is probably more danger of getting lost in the maelstrom of the curriculum of the high school or college than there is of getting lost in the world of occupations. Certainly one lost in the world of occupations would have more chance of finding himself than one lost in a maze of school subjects, few if any of which may be clearly associated with any occupation.

So many of the high schools failed to report on educational and vocational guidance that no statistical statement concerning the same can be made. Certain of the high schools of Los Angeles, Oakland and San Francisco provide educational and vocational guidance. The work is also maintained in many of the high schools in the smaller cities of the state, the courses at San Jose and Pomona standing out most prominently.

The educational guidance courses when given in regular class are as a rule open to first or second year pupils. They deal with the educational equipment required for entrance upon the various occupations; make a critical study of the various branches taught in the high school; and, as far as possible, show their relationship to the various occupations and to the problems of life in general. They also deal with the problem of selecting the courses that adjust themselves most naturally to the various types of mind. Where given in class one recitation period per week for one semester is devoted to the work. Educational guidance is very necessary in most of the high schools of this state since the pupils are generally allowed to elect both courses and subjects. Many of them thus choose an unrelated mass of material which they can

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neither assimilate nor apply to future needs. They frequently elect courses or subjects because they consider them easy or in order that they may be in the same class with some other pupil. Rarely do they choose them upon consideration of capacity, interest or future utility.

Certain high schools maintain elective courses in life career study. These are usually credit courses utilizing one recitation daily for one semester. They are designed to prepare the student in such a manner as to assist him in making an intelligent choice of a vocation and also in finding suitable avocations; and aim to give him such information as will enable him to judge intelligently—of his own capacity and ability, of the conditions and requirements of each of the common occupations, and of the many elements that contribute to success in life.

Since the requirements of many of the occupations include sometimes a secondary education and sometimes a higher education, it will be seen that educational guidance is frequently a necessary part of vocational guidance.

Class work in educational or vocational guidance can only partially fulfill the requirements of the situation. Since only the most general information relating to occupations, individual capacities and the requirements for success in life may be attained through class instruction, individual study and individual counsel will be necessary to meet the needs of a majority of the pupils.

It will be seen from the above that the term *vocational guidance* does not truly indicate the import of this subject. Knowledge, counsel and individual choice rather than guidance should control the selection of a vocation.

In a democracy the final choice of an occupation must rest with the one who would enter the same, and with no other. It is therefore evident that he who would guide intelligently the youth in the selection of his vocation must be an intelligent counselor. As a corollary to this he who would counsel and he who would be counseled must have the necessary knowledge as a basis for such counsel. Both should know something about the processes involved in each of the common occupations and the conditions surrounding the same. They should also know the type of individual best suited to each occupation. The counselor should know the mental and physical characteristics as well as the training and the economic situation of each youth whom he would guide. The youth should be led to see the lines in which he possesses the most as well as those in which he possesses the least talent. He should understand, among other things, the preparation necessary for entrance upon the vocation, and the recompense to be expected therefrom. ***It is therefore evident that vocational guidance in a democracy is largely prevocational education.***

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It is highly desirable that each individual should in his own mind select a possible vocation very early in life, that he should constantly have before him a definite goal toward which he is working, because such a selection will help to anchor him and give him a motive for study. He may and probably will change his mind from time to time as he approaches maturity. This may prove an advantage since it will tend to stimulate him to investigate different occupations and thus finally lead to a broadening of his knowledge. Ultimately he should become conscious that the selection of the vocation, being one of the most important steps in his life, should be made only after having given the subject the most careful consideration. This consciousness may be brought about by the study of the lives of men and women who have succeeded in the various walks of life.

Error in the selection of a vocation can be eliminated only by the elimination of ignorance of self and ignorance about the common, present-day occupations and their demands upon the individual. While visits to industrial, commercial and other plants and the viewing of representations of the same through moving pictures may do much to remove our ignorance of these things, these occupations may be adequately interpreted to us only through the agency of the written page or the word of mouth. Reliable information about the modern vocations is difficult to find. Up to a few years ago there was little or no demand for such material and much of that available at the present time is useless because of the change brought about by the modern industrial and commercial revolution.

The establishment of an educational content consisting of accurate information about the principal human occupations will not only make it possible to provide a useful education from the vocational standpoint, but it will also help to provide a liberal education that will be real instead of imaginary.

INDIVIDUAL VERSUS UNIFORM MINIMUM STANDARDS.

In my last report I drew attention to the fact that the uniform minimum standard of promotion maintained throughout the school system was, directly or indirectly, responsible for the elimination of a large proportion of the children of high school age not in attendance upon that institution. This elimination begins in the upper grades of the grammar school and extends through the entire high school period.

In rough numbers, but half the pupils who enter the elementary school complete it. Most of the pupils who finish the eighth grade enter the high school, but statistics of 24 of the principal cities, submitted to you in my previous report, show that for each 100 pupils entering the ninth grade in 1911, 65 reached the tenth grade in 1912, 49 reached the

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eleventh grade in 1913, 38 reached the twelfth grade in 1914, and approximately 33 graduated from the high school. In consideration of the fact that all of these classes probably gained more than they lost by migration between the states, it would appear that considerably less than one-sixth of our children completed a high school course at that time. Expressing the matter in other terms, for each 100 youths of high school age but 30 are enrolled in the secondary schools.

True, a larger relative proportion of the children probably complete the elementary schools, enter the high schools, remain longer therein and graduate therefrom in the state of California than in any other state of the Union. This is undoubtedly due to the fact that the California schools in general offer a greater diversity of courses and maintain more elastic standards of promotion and graduation than those of any other state. These facts should not, however, cause us to become self-satisfied. It is of little importance that we stand second to none in the degree in which we have democratized education so long as we have not completely adjusted our system to the needs of all of our children. Indeed, recent vocational legislation in several of the states may soon place them in the lead in the matter of enrollment in the public secondary schools.

The uniform minimum standard for promotion and graduation is inherited from the period in American educational development when the secondary school served only as a selective and preparatory institution for the college. At that time it was considered one of the most important, if not the principal, function of the schools to weed out those who were not fitted for college work. Later we standardized the output of the elementary school so that it became also an institution of selection. And though we like to think that we have at present a democratic system of education in this country, the fact remains that the common standards which we maintain for selective purposes are blocking the educational progress of many of our children almost from the day they enter school. Very few elementary schools provide suitable work for the pupils who have failed to make their grades. If they are under fifteen they are required to repeat the work of the previous year, if they are over fifteen they are permitted to leave school, sometimes to work, more often to loaf. At the end of the elementary school course a barrier is placed which only the elect can cross.

Under the present law, and by general custom, the high schools do not admit pupils who have not satisfactorily completed the elementary school course. The elementary school provides but one course and maintains a minimum standard of accomplishment therein that is practically uniform throughout the state. True, a few pupils who have not graduated from the grade schools are allowed by special dispensation to enter certain of the more liberal high schools, but the minimum standard of

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scholarship maintained in these schools is usually such as to forthwith eliminate this type of pupil.

However, thousands of students are allowed to graduate from the high schools of this state who are not permitted to enter the university upon their record. The presence of these students has not appreciably lowered the educational tone of the California high school. On the other hand, this policy, which is unique and practically if not entirely confined to this state, is mainly responsible for the large number of pupils enrolled in these schools, and for the relatively large number who graduate from them. This policy represents the first step in opening and keeping open the doors of the high schools of the state to all of the children of high school age.

Usually the lowest passing mark in any subject in the high school is 70 per cent. The pupil who passes with a record below 85 or 90 per cent in the fifteen units of work required is not permitted to enter the university. *Why retain the minimum standard at 70 per cent? Why not lower it to 60 per cent or 50 per cent? Why have any uniform standard for those pupils who are not to be permitted to enter the higher institution and for whose scholarship we are not held entirely responsible? Why should we not maintain an individual standard for them, and give them every opportunity to learn all they are capable of learning before turning them away from the school? Why not open the doors of our high schools to all of our children of high school age? Why should we refuse any child an opportunity to get what he can from our schools so long as he does his best? Why? The answer is simple: we still use the public school primarily to select material for higher institutions, and we do not eliminate the uniform standard because we fear that we will destroy the efficiency of the school as an institution of selection.* But even this fear is unfounded. An individual standard of measurement placed upon the effort of each pupil would result in a higher standard of scholarship upon the part of the talented as well as upon the part of the average and the slower pupils. This would be especially true if the actual record in each subject were entered upon the diploma received by the pupil.

Children are born with different potentialities and with different degrees of possibilities within these potentialities. The world demands men and women with different talents and with different degrees of ability in these talents, and yet the school confines itself to developing but a few of these and insists that all reach a certain uniform degree of proficiency therein. *It is, therefore, absurd to attempt to provide equal educational opportunities for all of our children as long as we retain a minimum uniform standard of achievement in the various subjects of the curriculum.*

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The only way that we can provide equal educational opportunities is to maintain a curriculum of studies comprehensive enough to permit each child, whatever his special talent may be, to fit himself as well as possible for at least some one of the various occupations that constitute the world of work in a democracy; to allow him free access thereto, and to permit him to advance therein and thus to cover the whole ground, even though lack of native ability may make a high or even a medium standard of scholarship impossible for him.

The school is not answerable for the native ability of the child; no one expects it to transform the child with little capacity into a scholar, but it it charged with the responsibility of giving him an opportunity to develop to the highest degree any talent which he may possess, provided of course that such talent may be desirable and of practical use to society.

VOCATIONAL COURSES AND THE HIGH SCHOOL CURRICULUM.

The titles of the courses and subjects composing the present high school curriculum mean little or nothing to the pupil or patron of the school. The terms classical, scientific, modern language, English, English scientific or technical, as applied to courses in high schools, suggest only in the most general terms their various contents, and give no clue whatever as to their purpose. Likewise the titles of subjects are usually meaningless so far as their application to life is concerned. Hidden away in the subject of physics or chemistry there may be information of a mechanical character which would be very useful to the pupils who will ultimately take up an industrial occupation, but this they can not know before taking the course except as they accidentally discover it through hearsay. Physics II may be a practical course in mechanics and electricity, and Chemistry II may be a course in industrial and agricultural chemistry, but this may be known to the teacher alone and may be discovered only by a personal investigation.

Listed along with such courses as the classical or scientific we usually find the commercial course, the household arts course or the agricultural course; and listed with such subjects as algebra, geometry and physics we find stenography, typing, bookkeeping, cooking, sewing, etc.

A part of the above subjects belong to the academic group. They are distinctly school-made subjects governed by the principle of scientific completeness, and containing in whole or in part complete logical organizations of the fields they represent. The others are vocational subjects that make no claim to logical completeness and that are governed entirely by the idea of immediate utility. The subjects of the first group contain much that may be of practical value to many and much that may be of practical value to few or to none. They are an inheritance from that

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period of educational development when the dogma of formal discipline rather than the doctrine of direct usefulness governed the selection of the material composing the secondary school curriculum. Clearly the contents of these subjects need modification. Much of the material contained therein which does not have any application to present life demands should be eliminated, and the remainder should be organized to meet more specifically the needs of the various vocational courses maintained in the higher educational institutions.

The academic courses mentioned above are designed to prepare for the various departments or colleges of the university, but it is very difficult, if not impossible, to find out definitely for what departments or colleges they prepare, whether they contain subjects not required by these courses, and whether they contain all of the subjects that would be desirable as a preparation for the future vocational training to be secured in the higher institution of learning.

The function of the high school is to prepare for life and to prepare for higher education. There is disagreement as to which of these functions is more important. Where a choice has to be made between these two purposes the local situation should be the deciding factor. However, the local situation in most communities warrants the establishment of at least one course which will lead to a higher institution and at least two which will prepare for local occupations. One of the two latter should be a complete course in household arts. In rural agricultural districts the other should be a course in one or more phases of practical agriculture.

Suggested Changes in Curriculum.

In order that pupils and parents may clearly understand the purposes of the various courses and the various subjects, and in order that the pupil may make an intelligent choice, high school courses should be organized into two distinct groups.

There should be a vocational group containing courses that lead directly into occupations usually found in the immediate community and these courses should bear the names of the occupations for which they prepare.

There should be preparatory courses leading into occupational courses to be pursued in later years in the high school or in the university, college or normal school; and these courses should bear the names not only of the general occupations for which they are preparing, but also of the departments of the higher institutions which the students are preparing to enter.

The vocational courses should be governed by the needs of the vocations for which they are preparing. They should provide subjects supplementary to such vocations, subjects preparatory to citizenship, and subjects for individual culture.

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In the same manner the preparatory courses should be governed by the courses to which they lead. *In short, the dominating purpose in the organization of any course in any public educational institution should be the ultimate life occupation for which it prepares.* These courses should, however, be so modified as to fit the abilities, interests and financial situations of the individual pupils, but in no case should a pupil be allowed to "browse" about selecting the subjects that compose his course without consulting with those who know something of the demands of society.

Each high school should provide as many different vocational and preparatory courses as local conditions warrant and permit. Pupils should be allowed to choose from these courses only after having counseled with parents and teachers. In no case should a pupil be allowed to omit a subject essential to the unity of the course he is pursuing unless it is evident that the interests of the pupil would suffer were he compelled to take the work. However, *a subject should not be considered essential to the unity of a course unless it is clearly an indispensable part of the equipment necessary for entrance upon the occupation for which the course prepares.* If an individual standard of achievement were maintained rather than a minimum uniform standard, but few pupils would insist upon dropping subjects a knowledge of which is necessary to success in the occupations they have chosen. Slight accomplishment with a poor record in a subject that relates closely to the life needs of the pupil will be worth much more to him than marked accomplishment with a high record in a subject that bears no appreciable relation to his future needs.

Many of the small high schools dissipate their energies in trying to maintain university preparatory courses that will fit pupils without condition for each of the colleges of the university. In order to do this numerous classes are maintained which enroll but one, two or three pupils. The funds of the districts are thus needlessly diverted from application to the legitimate purposes for which they have been raised; namely, that of providing secondary educational opportunities suited to the needs of all of the children of these communities who would take advantage of the same. Since the universities provide instruction in these subjects, it is absurd for the high school to maintain them at great expense in order that one or two prospective university students may be placed upon 128-hour instead of 133 or 138-hour courses.

This attempt to imitate the great city high schools has unduly increased the cost of secondary education in many of the small high school districts and has thus hampered the introduction and maintenance of such vocational courses as would tempt thousands of the boys and girls at home to enter the high schools and secure a secondary education.

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The small high school should maintain only such preparatory subjects as fit for admission into some one of the colleges of the university, and that college should be selected which requires for entrance those subjects which are generally of most practical value. When this has been done the remainder of the funds should be expended in developing a school which will appeal to and provide a useful education for the children who will never have an opportunity to attend a higher institution of learning. It is unfair and undemocratic to divert all of the resources of a public high school to providing for but one comparatively small group of children; and it is increasingly unfair and undemocratic to maintain courses in a high school that are not *essential* to the welfare of any of the pupils of the community, that are only maintained as conveniences for a few pupils while two-thirds of the children of high school age are not in high school largely because the courses maintained do not appeal to them or fit their needs.

Many persons think that the technical courses maintained in the modern high schools are industrial courses. This is, however, not the case. The technical courses minister but little more to industrial education than do the scientific courses. But they do serve well as preparatory courses to the engineering colleges of the university. In fact they have enabled many young men to reach the university and secure a vocational education who would not have been able to do so through the scientific or the classical courses provided in our high schools. These technical courses were originally intended to be vocational, but that aspect has been lost and only the preparatory function remains.

One of the great problems confronting us in this state is that of having established in the technical and other high schools courses that are really vocational in their nature.

The distinction between a vocational and a technical course is quite clear. *In a vocational course the controlling interest is to be found in shop or in field, and only such science and mathematics are required as are essential to an intelligent interpretation of the practical experience obtained therein. In a technical course the controlling interest is to be found either in science or mathematics, and only such shop or field work is required as is essential to an intelligent interpretation of these.*

It is difficult to establish and maintain courses of a vocational character because there is a powerful tendency to make all courses conform to the scholastic tradition. There is also a tendency to make these courses fit for the university and at the same time fit for life. Where this is attempted the course ultimately becomes purely preparatory and the vocational end is completely lost. No adequate vocational courses can be established in our high schools until we cease trying to make them preparatory to higher educational institutions. The character of the

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work demanded at the present time for preparation for higher education is so radically different from that required for preparation for an occupation that any attempt to combine the work inevitably defeats the purpose of one or the other. Naturally the vocational end is the one which is lost, the other being thoroughly entrenched in the system.

To sum up, there is great need for a reorganization of the curriculum of the high school to the end that the vocational courses may be segregated from the courses that prepare for higher educational institutions. Further, in order that the parent and the pupil may be able to see clearly where the various courses lead, each course should be indicated by the name of the vocation or group of vocations for which it is intended to prepare. This should apply both to college preparatory and to vocational courses. The college preparatory courses should also be designated by the names of the college courses for which they prepare, and each course, preparatory or vocational, should be governed by the demands of the occupation for which it is planned to prepare even though the actual occupational training is to be secured in a higher institution.

SPECIAL PREVOCATIONAL AND VOCATIONAL SCHOOLS ESTABLISHED.

Prevocational School.

During the last biennial period two schools have been established which are distinctive in their functions.

One year ago the Stockton school department established a prevocational school for over-age boys of the sixth, seventh and eighth grades. Most of the pupils who attended this school had become discouraged with their inability to satisfactorily meet the requirements of the regular grade schools.

It is not the aim of this school to prepare pupils directly for the trades, but rather to provide opportunity for preparation which will better enable them to choose vocations when they leave school. Incidentally, the practical work given serves to stimulate the pupils to greater efforts in their other school work. The academic courses include all of the necessary essentials for entrance into the high school.

The school day extends from nine until four with one hour out for lunch. Three of the six hours are devoted daily to shop work. Courses are provided in carpentry, tinning, sheet metal work, blacksmithing, machine shop, and printing. The academic subjects are closely correlated with the industrial branches, thus providing a new and immediate motive for the work.

The success of the plan is amply proven by the fact that ten children were prepared for high school work by the end of the first year. These pupils had become discouraged with the pursuit of knowledge in the

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regular school and most, if not all, of them would have failed to complete the elementary course had they remained therein. It is important to note that these children who were not making satisfactory progress in their academic studies while giving their entire time to them in the regular school, satisfactorily completed them while giving half time to them in the prevocational school. The course of study of this school is an index to the type of course that must come in all of our elementary schools before we shall be able to reach the fifty per cent of pupils that under the present organization fail to complete the eighth grade.

Vocational High School.

In January, 1915, the Oakland department of education opened a new vocational high school, the first distinctly vocational school of an industrial character supported by public school funds, in this state. Courses are offered to boys in automobile repairing, cabinet making and carpentry, electrical work, blacksmithing, machine shop work and tool making, printing, and machine and architectural drawing. Girls are given instruction in dressmaking and millinery for the trade, home making and cafeteria management. Other branches taught are music, English, mathematics, science, history, geography, hygiene, economics, and government. In addition to the above, part-time courses are conducted in salesmanship for the benefit of clerks employed in Oakland department stores. Most of the girls take the course in sewing or millinery for the trade in addition to the household arts course. Some of the boys pursue two vocational courses.

Six hours of work daily are required of all pupils, with the privilege of electing another hour. By thus lengthening the school day, the pupil is enabled to carry a regular academic as well as a vocational course. Half of each day is devoted to trade work and the other half to other studies.

The vocational teachers employed in this school have all had practical experience in the occupations which they teach; and the teachers of the academic subjects have been selected partly because of their sympathy with the vocational ideal in education. The academic subjects are all correlated closely with the various vocational courses, so that there is an absolute unity of purpose prevailing among the various teachers of the institution.

The school also maintains a prevocational department open to pupils of the seventh and eighth grades. The academic work for these grades covers about the same subjects as are given in the regular grammar school except that they are taught with constant reference to their relation to industry. Much more time is given to shop work and drawing. The pupils are tried out in wood and metal work, elementary electrical work, and industrial drawing.

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The course is planned to enable the pupil to discover his likes and dislikes, his aptitudes and limitations, to consider carefully the advantages and disadvantages of the various trades, and to choose intelligently the kind of work in which he should specialize. Pupils completing the eighth grade receive a diploma of graduation the same as from the other schools of the city.

When a pupil has decided upon the trade he wants to learn, and has attained sufficient physical and mental maturity to be given real trade instruction, he is permitted to take up his chosen work, and given one-half of each day in trade training.

Since the work in a vocational school has to be conducted largely by the individual method, the cost of instruction is greater than in the usual high school. In the Oakland vocational school this is partially offset by the fact that the shops are all turning out a commercial product, some of them largely supporting themselves.

The establishment of this special school is an important event in the development of the California school system. While a number of our great city high schools maintain all of the courses of instruction provided by this institution, it remains to be seen whether real vocational courses can survive in institutions largely given over to the academic ideal. We are fortunate indeed to have one large high school maintained in the state wherein the faculty is as a unit working to solve the problem of building up adequate courses designed to prepare youth directly for active occupational service in the industries.

POSSIBLE FEDERAL AID FOR VOCATIONAL EDUCATION.

At the first session of the 64th Congress the vocational bill, popularly known as the Page Bill, was reintroduced in the upper house by Senator Smith, of Georgia, and in the lower house by Representative Hughes. This measure was originally the outcome of an investigation conducted by a special commission created by Congress. The President, in his last regular message to Congress, recommended its passage, but the heavy drain upon the treasury, due to the preparedness program, may hinder the bill from becoming a law in the near future.

The act as it now stands, if passed, will fit perfectly into the educational program advocated by your honorable body. It is designed to aid the same schools and the same courses throughout the United States that you planned to aid in the state of California, through the vocational education bill which passed both houses without a dissenting vote at the last session of the legislature, but which failed to meet the approval of the Governor because of financial considerations.

The bill, as it now stands, provides for a Federal Board for Vocational Education, to consist of the United States Commissioner of Education, who shall be chairman of said board, and four associate members

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appointed by the President. The duty of this board is to administer the various funds provided in aid of vocational education, and to make such educational, social, industrial and economic investigations as are necessary for the carrying out of the provisions of the act.

Should the present act become a law, appropriations will be made as follows:

For the support of agricultural education in secondary schools, the first appropriation will be $500,000 annually. This amount will be increased $250,000 annually until it reaches, in ten years, $3,000,000. This fund will be allotted to the states in the proportion which their rural populations bear to the rural population of the United States. It is provided that during the first six years no state shall receive less than $5,000 per annum, and thereafter no less than $10,000 per annum.

The above fund may be applied only to the salaries of teachers, supervisors, or directors of agricultural subjects, and then only as provided through general regulations established by the various state boards of education with the approval of the federal board.

For the support of trade, industrial, and home economics subjects the same provision will be made. In this case, however, the national fund will be available only for salaries of teachers, and will be allotted to the states in the proportion which their urban populations bear to the total urban population of the United States.

For the preparation of teachers, supervisors and directors of agricultural, trade, industrial and home economics subjects $500,000 will be appropriated for the first year. This amount will be increased at the rate of $200,000 annually until it reaches $900,000 and thereafter the annual appropriation will be $1,000,000. It is provided that this fund shall be apportioned upon the basis of population, and also that for the first three years no state shall receive, upon this account, less than $5,000 per annum, and thereafter no less than $10,000.

The act provides for extra appropriations to cover the sureties provided for in each case.

Before a state will be entitled to receive national aid, its state board of education must submit plans of the work to the federal board. Either the state or the local community will be required to provide as a minimum amount one dollar for each dollar contributed by the national government.

The education provided for under this act will have to be of less than college grade and maintained for the purpose of fitting pupils fourteen years of age or older for specific vocations. One-third of the entire amount received from the national government will have to be used for part-time instruction in day schools for pupils over fourteen and under eighteen years of age. The instruction in night schools receiving such aid will have to supplement the daily employment of the students.

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A DISCUSSION OF THE PRESENT LAW AS IT RELATES TO PART-TIME CLASSES, EVENING SCHOOLS AND STATE AID, WITH CERTAIN RECOMMENDATIONS.

The Evening School.

The present law provides that an evening high school, in order to qualify as such, must be maintained the same length of time during the year as the other schools of the district, it must be maintained five nights per week, and after the first year it must have an average daily attendance of ten pupils. This means that it must meet all of these conditions and have an average half-day or full evening attendance of twenty pupils before it can qualify to receive state and county aid. However, just as soon as it does qualify as a high school with an average daily attendance of ten, it is entitled to receive from the state fund approximately $1,000 on the school basis and from the county fund $125 for each of the first four teachers employed for the full evening session. In addition to this it is entitled to receive its apportionment on average daily attendance, which approximates $100 from the state fund and $533 from the county fund. Thus if it employs but one teacher it is entitled to receive in the neighborhood of $1,758 from state and county, and if it employs two teachers it may receive approximately $1,883 from these sources.

Since the usual annual salary of the evening high school teacher ranges from $400 to $700 per year, it would be good business for a high school board to maintain an evening high school if it could be sure of securing the minimum average daily attendance required. A district maintaining such as school might clear without any effort on its own part $1,000 or $1,200 annually.

On the other hand, if the evening high school, on account of lack of attendance or other cause, can not be maintained the full length of time that the day high school is maintained, if it can not be maintained five nights in the week, or if it can not secure a minimum average daily attendance of at least ten pupils, it is certainly a bad investment from the financial standpoint since no aid whatever can be obtained from state or county.

At the same time, if the authorities of a day high school desire to maintain a special course for part-time pupils after school hours, on Saturdays or in the evening, the attendance can not be returned and no aid can be received either from state or county. Further, the small high school is discriminated against because it can not maintain evening classes for one, two, three or four evenings a week only and count the attendance. Nor can it maintain a class for three or four months, as the case may be, and return the attendance.

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The evening school is largely intended to provide educational opportunities for adults who are under employment. Attendance is voluntary so, if these schools are to serve the state by reaching all of those who are in need of further school training, they must not only provide state-wide opportunity for the various individuals to secure the training that is best fitted to their personal needs, but they must provide this opportunity at such time as may fit the convenience of these people. Thirty-eight or forty-two weeks per year is more than many of them can or will attend, and five evenings per week, week in and week out, are considered impossible by most of them. They have home, business or social duties which they consider of equal or greater importance. These require at least a part of their evenings.

Upon the whole, evening schools can maintain successfully only such courses as require attendance but one, two, three, or at most four evenings per week, depending upon the time that the individuals of various classes can spare from their other duties. Hence it is only in the cities where the attendance is large that the courses can be so arranged as to maintain successfully a school five evenings per week for the full academic year. Though fifty persons in a high school district might desire school opportunities for two or three evenings each week, it would be impossible to provide the same for them alone and return the attendance and thus secure state and county aid for maintaining the work.

Part-time Classes.

During the last two years a number of rural high school districts desired to maintain after-school or Saturday classes in agriculture for the benefit of enterprising young farmers in their communities. This office was consulted as to whether such classes could be maintained and as to whether the attendance could be returned as high school attendance. Unfortunately it was necessary to inform these districts that they could not count attendance in these classes, neither could they maintain them as high school classes nor use high school funds to pay the teachers of agriculture for such work.

Under the operation of our present law an elementary school district can not maintain continuation or part-time courses after regular school hours, or on Saturdays, for persons over fifteen years of age who are under employment, though fully fifty per cent of our children leave the elementary school without completing the course, and only about half of those complete the sixth grade. As a rule the evening school does not appeal to an individual until he is older, until he has entered or is about to enter upon an apprenticeship. The evening school attendance—and properly so—is largely confined to individuals over eighteen years of age.

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The elementary evening classes where they exist are also providing the only educational opportunities for adult foreigners who do not know the English language or who are illiterate. The education of these persons who, when they first arrive, constitute a more or less floating population and who are therefore peculiarly charges of the nation and state rather than of the local communities, is of great importance and nation and state should provide aid to such school districts as take upon themselves the responsibility and the burden of providing this education. In some instances these persons are to be found in considerable number in rural communities. The elementary school districts wherein they reside can not, as a rule, afford to maintain evening courses for their benefit, and the law governing evening high schools and attendance upon the same is such as to eliminate the possibility of the high school districts taking care of this problem. If provision can be made for caring for this class of persons through evening high school classes, the state aid and the county aid will be sufficient for the work until the national government moves in the matter.

Function of the Evening High School.

The evening high school does not duplicate the work of the day high school nor does it minister to the same class of students. The persons who are served by this school would as a rule find it impossible to attend the day high school even if it provided suitable courses. The work of the evening school is mostly designed either to prepare directly for a vocation or to supplement the training and experience of individuals already engaged in occupations. The instruction to be satisfactory must be largely individual and by the project or task method; consequently the number of students that can be handled successfully in one class is much smaller than can be handled in a regular high school class. True, these schools usually occupy the regular high school building, but this does not alter the situation as it relates to instruction, and as it relates to the need for state and county aid to stimulate the introduction of evening school courses in the many small high school districts throughout the state.

The present law which provides state and county aid on the school and teacher as well as on the attendance basis, and which is therefore intended to stimulate the creation of new evening high schools in order that educational opportunities may be extended to those who have not been fortunate enough to complete their education in the regular day schools, or who need vocational training or training supplementary to a vocation, actually stimulates and aids the establishment of such schools

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and the provision of such opportunities only in the larger centers of population.

In view of these considerations your Commissioner of Vocational Education recommends that steps be taken to have the various sections of the existing law amended to provide as follows:

Amendments to Law Recommended.

That local school authorities shall be authorized to maintain in connection with the day elementary and day high schools under their charge part-time elementary and secondary classes outside of regular school hours, either during the day or the evening, said classes to be held at such hours, on such days or evenings and for such length of time as may be determined by the local school authorities; and that the enrollment of and attendance upon such classes shall be kept separately and the units of average daily attendance added to the attendance of the respective day schools.

That where local authorities maintain evening schools of the elementary or secondary grade they shall be authorized to hold sessions on such evenings and for such periods and lengths of time during each year as may be deemed advisable; and that the enrollment of and attendance upon such schools shall be kept separately and the units of average daily attendance added to the attendance of the elementary or secondary schools of the district, as the case may be.

That any person under 16 years of age, employed during the daytime and not in full attendance upon an elementary school, may attend an evening high school class; that any person over 16 years of age may attend an evening high school class and that the attendance of such person may be returned as high school attendance.

That high school boards may maintain in their local day high schools special part-time courses for persons engaged in agricultural, commercial, industrial, trade, or other vocational pursuits, and that the enrollment of and attendance upon such courses shall be kept separately and the units of average daily attendance added to the attendance of the various high schools; provided, that where each pupil of a class pursuing such a part-time course in agriculture devotes at least three hours daily or an equivalent amount of time to farm mechanics and to farm project work conducted by him on a commercial basis, and at least three hours daily or an equivalent amount of time to academic work in school or in class—a part of which supplements the practical work—all under the direct supervision of a teacher holding a secondary special certificate in agriculture, the project work and farm mechanics and the academic work or school attendance shall each count equally in making up each minimum six-hour unit of average daily attendance; and provided further, that where each pupil of a class pursuing a part-time course in any other vocational subject devotes at least three hours daily or an equivalent amount of time to practical educative work under employment in that vocation, and at least three hours daily or an equivalent amount of time to academic work in school or

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class, a part of which supplements the practical experience—all under the direct supervision of a competent and properly certificated vocational teacher—the practical work and the academic work or school or class attendance shall count equally in making up each six-hour unit of average daily attendance.

That the laws relating to the apportionment of state and county high school funds upon the school unit and teacher unit bases be so changed as to apply only to day high schools rather than to day and evening high schools.

That *additional* state aid be provided to high school districts as follows: For each of the first ten units of average daily attendance in the district upon part-time courses provided during the regular day school hours for persons engaged three or more hours each in academic and three or more hours in occupational work as described above, $25, and for each additional unit of average daily attendance $10; these amounts to be apportioned to the various elementary and high school districts through the usual channels in accordance with the attendance reported and used as a basis for the appropriation.

PROVISION NEEDED FOR THE PROFESSIONAL TRAINING OF TEACHERS OF VOCATIONAL SUBJECTS.

All agree that the teacher of a vocational subject must be a master of the occupation which he would teach. That this view is accepted is evidenced by the fact that while the legislature at its last session authorized the State Board of Education to establish and maintain such standards as it may see fit for certification in other special subjects, it provided that a credential may not be granted in a vocational subject unless the candidate shall have had at least three years of experience as a journeyman worker, or its equivalent, in the occupation in which he desires certification.

During the last year your honorable body granted 63 credentials of the purely vocational type. A few of these were granted to persons who had previous teaching experience; of the remainder none had special training for teaching and they were given temporary credentials only.

The problem of working out satisfactory vocational courses is a sufficiently difficult one even for the professionally trained, experienced teacher. Unlike the teacher of the regular school branches the untrained teacher in this field has no pupil experience in the subject to guide him and if he depends upon his experience as a pupil and tries to apply the method of the common school branches to the new field he will most certainly prove a failure. Another factor which tends to make the situation still more difficult is the lack of academic training upon the part of the most competent workers in the skilled occupations.

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The temporary credential which serves to eliminate automatically those who have no talent for teaching would probably meet the situation if we were confronted only with the problem of selecting teachers, but we are also confronted with the problem of building from the foundation the content of each of the vocational courses and a satisfactory method of instruction therein. Vocational education is in its infancy; it is for us a new departure; its problems are many and difficult of solution; it is competing with scholastic tradition which condemned it before birth and which is combating it at every turn. The failure of a teacher means the failure of a class, and but few of the vocational subjects are in a position to withstand many if any such failures.

The people of California are convinced that vocational training should be made an essential part of the educational scheme of this state and are ready to give it a trial; the school authorities are beginning to introduce the work, but realizing the danger of failure they hesitate to experiment with a teacher who may neither know what to teach nor how to teach. If we would guard against failure in these subjects we must have a body of teachers who are not only masters of their subjects but teachers who are competent to assist in building up a content of teachable knowledge in their own special fields and who are trained to impart to others what they know.

Men and women of experience engaged in skilled occupations are not likely to give up their work and attend a day normal school or technical school in order to get the necessary professional training. They are usually thirty or more years of age and the sole support of a family. Since the field is new and the introduction of courses problematical, even if they do obtain the necessary training and qualify they may not be able to secure a position for some time, perhaps never. Even if they were willing to attend a day normal school none of these schools could provide opportunity for practice teaching in vocational subjects, since most of these courses are at present maintained only in the public evening schools of the state.

There can be little doubt that many men and women skilled in industrial and commercial occupations would be willing to attend evening classes for the training of vocational and manual arts teachers. It would therefore seem that since the prospective students can not afford to give up their daily work or will not give it up in order to attend teachers' training classes, and since the only adequate facilities for practice teaching exist in the public evening schools, it will be necessary to make provision for these classes in connection with such city school systems as maintain the necessary evening vocational courses.

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Legislation Recommended.

Two years ago I recommended to your honorable body legislation covering this matter, and you, in turn, recommended the same to the legislature. You provided for the introduction of a measure, Senate Bill 237, which I feel certain would have passed had not the financial situation made it impossible at that time. The two years of experience have developed nothing that leads me to change my mind in regard to the need for such legislation, nor has anything so far developed which would lead me to recommend any vital changes in the bill as originally introduced. I therefore recommend that you urge the passage of the measure at the coming session of the legislature.

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PART II.

CERTIFICATION OF TEACHERS OF SPECIAL SUBJECTS.

GENERAL STATEMENT.

After years of experience upon the part of county boards of education in handling independently of each other the matter of certifying teachers of special subjects, and upon the request of the members of such boards, the superintendents of schools and the teachers of the state, acting through the Council of Education, the legislature of 1915 made it a duty of the State Board of Education to prescribe uniform regulations and qualifications upon which county boards of education could grant such certificates.

Your Commissioner immediately started an investigation of the status of certification in special subjects as maintained by the various county boards of education of the state. This investigation revealed the fact that there was practically no uniformity in the standards maintained by the various county boards.

In some instances, persons had been authorized to teach certain special subjects in high schools who possessed no school training beyond a secondary school course and who had little or no experience in the special subjects to make up for this lack of academic education. Some counties granted the certificate upon credentials alone, others maintained examinations in the various special subjects. In most of the counties no distinction in qualifications was made for the elementary or the secondary special certificate. In fact, in many of the counties no general standard was maintained, each case being handled without regard to any general standard of proficiency. The few counties that did maintain a general standard usually required for the certificate but two years of training beyond a high school course. A part of these maintained the above standard for the elementary certificate and required three years of training beyond a high school course for the secondary certificate. Only one county in the state required four years of training beyond a high school course for the special certificate of secondary grade. The investigation showed that special certificates had been granted in 143 different subjects.

With this information at hand your honorable body provided that county boards of education may grant certificates in special subjects only upon credentials issued by certain accredited educational institutions and upon special credentials issued by the State Board of Education.

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By general regulation you fixed the minimum requirements for the credentials as follows:

For the elementary credential you provided, (*a*) that the candidate shall have at least three years of instruction beyond that required for graduation from a high school maintaining a four-year course in advance of the eighth grade, or that he shall possess an equivalent amount of training; (*b*) that at least one-half of the said three years' instruction shall have been devoted to study or work in the special subject or subjects in which the individual is applying for certification and in such subjects as are strictly supplementary thereto, as arranged and approved by the recommending authorities of the institution in which the work was taken, or that he shall possess an equivalent amount of special training; (*c*) that two-fifths of a year of the time required to be given to the special subject or subjects shall have been devoted to a study of the pedagogical subjects suited to the training of an elementary school teacher; at least one-half of which time shall have been devoted to practice-teaching, including methods of instruction in the special subject or subjects, under competent supervision.

For the secondary credential you provided, (*a*) that the candidate shall have at least four years of instruction beyond that required for graduation from a high school maintaining a four-year course in advance of the eighth grade, or that he shall possess an equivalent amount of training; (*b*) that at least one-half of said four years' instruction shall have been devoted to study or work in the special subject or subjects in which the individual is applying for certification and in such subjects as are strictly supplementary thereto, as arranged and approved by the recommending authorities of the institution in which the work was taken, or that he shall possess an equivalent amount of special training; (*c*) that at least two-fifths of a year of the time required to be given to the special subject or subjects shall have been devoted to a study of the pedagogical subjects suited to the training of a secondary school teacher; at least one-half of which time shall have been devoted to practice-teaching, including methods of instruction in the special subject or subjects, under competent supervision.

At your request this office had blanks printed and sent to the various institutions in the United States which prepare persons for teaching special subjects. A number of these responded with the request that they be accredited in certain special lines. After a careful investigation of the opportunity for training offered by each of these institutions, you authorized 14 located in this state and 13 located in other states to issue credentials in certain specified special subjects.

The detail of handling the cases of applicants for the state board credential in special subjects was turned over to this office. During the

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year in the neighborhood of 2,000 persons made inquiry concerning the procedure for securing this credential. After being informed of the standards maintained by the State Board of Education many of these persons made no further application. Of those who did formally apply many were unable to qualify.

In handling the various applications the state board has, except in the case of successful teachers already in the service, rigidly adhered to the standard for certification set forth above. In substituting equivalents for academic training, the board has in no case allowed more than one year of credit for each two years of practical or teaching experience in the special field. The statistics printed herewith will give some notion of the scholastic training and experience of the various individuals granted credentials by the State Board of Education.

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TABLE I.

Manual and Fine Arts Type.

	Men.	Women.	Total.	Years of academic training beyond high school course*				Years of practical experience in vocation				Years of teaching experience				
				1 or more.	2 or more.	3 or more.	4 or more.	2 or more.	3 or more.	6 or more.	10 or more.	1 or more.	2 or more.	3 or more.	5 or more.	8 or more.
Elementary Grade.																
Manual Training	3	1	4	-----	1	-----	-----	-----	-----	1	1	-----	-----	1	1	1
Manual Training, Instrumental Drawing	1	-----	1	-----	1	-----	-----	1	-----	-----	-----	-----	-----	-----	1	-----
Manual Training, Arts and Crafts	1	-----	1	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	1	-----
Free-hand Drawing, Painting	-----	4	4	-----	-----	2	2	-----	-----	-----	-----	-----	-----	-----	-----	3
Free-hand Drawing, Painting, Instrumental Drawing	-----	1	1	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	1
Free-hand Drawing, Painting, Arts and Crafts	-----	2	2	-----	-----	1	1	-----	-----	-----	-----	1	-----	-----	-----	-----
Free-hand Drawing, Painting, Instrumental Drawing, Arts and Crafts	1	2	3	1	-----	1	1	-----	1	-----	-----	-----	-----	-----	1	-----
Arts and Crafts	-----	1	1	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	1	-----
Totals, Elementary Grade	6	11	17	1	2	4	7	1	1	1	1	1	-----	1	5	5
Secondary Grade.																
Woodwork	12	-----	12	3	3	3	-----	-----	2	-----	5	3	-----	3	-----	5
Woodwork, Instrumental Drawing	17	-----	17	3	6	1	4	4	3	4	3	1	6	2	3	2
Woodwork, Instrumental Drawing, Arts and Crafts	7	2	9	-----	2	5	2	-----	1	1	1	-----	-----	2	5	2
Woodwork, Arts and Crafts	4	-----	4	-----	-----	2	1	-----	3	-----	-----	-----	1	1	-----	-----
Woodwork, Free-hand Drawing, Instrumental Drawing, Arts and Crafts	2	1	3	-----	2	-----	1	1	-----	-----	-----	-----	-----	2	-----	1
Woodwork, Free-hand Drawing, Painting, Instrumental Drawing, Arts and Crafts	1	1	2	-----	-----	1	1	-----	-----	-----	-----	-----	1	-----	1	-----
Woodwork, Free-hand Drawing, Painting, Instrumental Drawing	2	-----	2	1	-----	-----	1	-----	1	1	-----	-----	-----	1	-----	-----
Woodwork, Free-hand Drawing, Arts and Crafts	-----	1	1	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	1	-----
Woodwork, Ironwork, Free-hand Drawing, Instrumental Drawing, Arts and Crafts	1	-----	1	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	1
Woodwork, Ironwork, Free-hand Drawing, Painting, Instrumental Drawing, Arts and Crafts	1	-----	1	-----	-----	-----	1	-----	1	-----	-----	-----	-----	-----	1	-----
Woodwork, Ironwork, Instrumental Drawing, Arts and Crafts	8	-----	8	-----	6	1	1	1	2	2	-----	-----	1	2	4	1
Woodwork, Ironwork, Instrumental Drawing	8	-----	8	2	1	-----	5	2	1	1	1	2	1	1	-----	4

TABLE II.

Technical Arts Type.

	Men	Women	Total	Years of academic training beyond high school course				Years of practical experience in vocation				Years of teaching experience				
				1 or more	2 or more	3 or more	4 or more	2 or more	3 or more	6 or more	10 or more	1 or more	2 or more	3 or more	5 or more	8 or more
Elementary Grade.																
Instruction of Deaf Children	-----	3	3	1	2	-----	-----	-----	1	-----	-----	1	-----	-----	1	1
Oral and Dramatic Expression	-----	3	3	-----	-----	1	2	1	-----	-----	-----	-----	-----	-----	-----	-----
Agriculture	-----	1	1	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
Totals, Elementary Grade	-----	7	7	1	2	1	3	1	1	-----	-----	1	-----	-----	1	1
Secondary Grade.																
Engineering	3	-----	3	-----	-----	-----	3	2	-----	-----	-----	-----	-----	-----	-----	1
Engineering, Instrumental Drawing	3	-----	3	-----	-----	1	2	-----	1	1	1	-----	-----	-----	-----	-----
Engineering, Instrumental Drawing, Applied Electricity	1	-----	1	-----	-----	-----	1	-----	-----	-----	-----	1	-----	-----	-----	-----
Engineering, Instrumental Drawing, Machine Design	1	-----	1	-----	-----	-----	1	-----	-----	1	-----	-----	-----	-----	-----	-----
Agriculture	11	-----	11	-----	-----	2	9	1	3	2	-----	1	1	2	-----	-----
Agriculture, Farm Mechanics	1	-----	1	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
Agriculture, Landscape Architecture, Landscape Design	1	-----	1	-----	-----	-----	1	1	-----	-----	-----	-----	-----	-----	-----	-----
Architecture, Instrumental Drawing	2	-----	2	-----	-----	-----	2	-----	1	-----	-----	-----	-----	-----	-----	-----
Oral and Dramatic Expression	2	6	8	1	1	1	5	-----	-----	1	2	-----	-----	1	1	2
Oral and Dramatic Expression, Library Craft, Technique and Use	-----	1	1	-----	-----	-----	1	-----	-----	-----	1	-----	-----	-----	1	-----
Library Craft, Technique and Use	-----	20	20	7	-----	3	10	3	3	5	6	3	-----	-----	6	1
Journalism, Advertising	1	-----	1	-----	-----	-----	1	-----	-----	-----	1	-----	-----	-----	-----	-----
Totals, Secondary Grade	26	27	53	8	1	7	37	7	8	10	11	5	1	3	8	4

TABLE IV.

Commercial Type.

	Men.	Women.	Total.	Years of academic training beyond high school course*				Years of practical experience in vocation					Years of teaching experience				
				1 or more.	2 or more.	3 or more.	4 or more.	1 or more.	2 or more.	3 or more.	6 or more.	10 or more.	1 or more.	2 or more.	3 or more.	5 or more.	8 or more.
Elementary Grade.																	
Stenography and Typing, Bookkeeping	----	2	2	----	1	----	1	1	----	----	----	----	----	----	----	----	1
Stenography and Typing, Bookkeeping, Penmanship	----	1	1	----	1	----	----	1	----	----	----	----	1	----	----	----	----
Penmanship	----	1	1	1	----	----	----	----	----	----	----	----	----	----	1	----	----
Totals, Elementary Grade	----	4	4	1	2	----	1	2	----	----	----	----	1	----	1	----	1
Secondary Grade.																	
Salesmanship, Stenography and Typing, Bookkeeping	1	----	1	----	----	----	1	----	----	----	----	1	----	----	----	----	1
Salesmanship, Stenography and Typing, Bookkeeping, Banking and Finance	2	----	2	----	----	1	1	----	----	1	----	----	----	----	1	----	----
Salesmanship, Bookkeeping	2	----	2	1	----	1	----	----	----	----	1	1	----	1	1	----	----
Stenography and Typing, Bookkeeping	26	39	65	10	14	10	25	11	7	9	13	4	6	7	10	13	17
Stenography and Typing, Bookkeeping, Penmanship	7	11	18	1	5	5	6	3	3	3	2	2	2	1	3	3	8
Stenography and Typing, Bookkeeping, Banking and Finance	6	----	6	1	1	1	3	1	1	1	----	1	----	1	----	----	3
Stenography and Typing, Bookkeeping, Penmanship, Salesmanship	1	----	1	----	----	----	1	1	----	----	----	----	----	----	----	1	----
Stenography and Typing, Penmanship	----	2	2	----	1	1	----	1	----	1	----	----	----	----	----	----	2
Stenography and Typing	----	22	22	4	5	4	9	3	3	5	4	2	3	2	2	5	4
Bookkeeping	1	----	1	----	----	----	1	----	----	----	----	----	----	----	----	----	1
Bookkeeping, Penmanship	2	----	2	----	1	1	----	1	1	----	----	----	----	----	----	1	1
Commercial Law	2	----	2	----	----	----	2	----	----	----	1	----	----	----	----	----	----
Penmanship	----	3	3	1	1	1	----	----	----	----	----	----	----	----	----	1	2
Penmanship, Commercial Spelling	----	1	1	----	----	1	----	----	1	----	----	----	----	----	----	1	----
Typing	----	1	1	----	----	----	1	----	----	----	----	----	----	----	----	----	----
Totals, Secondary Grade	50	79	129	18	28	26	50	21	16	20	21	11	11	12	17	25	38

*Seven persons had less than five full years of schooling beyond an elementary school course.

TABLE V.

Physical Culture Type.

	Men	Women	Total	Years of academic training beyond high school course*				Years of practical experience in vocation				Years of teaching experience				
				1 or more	2 or more	3 or more	4 or more	2 or more	3 or more	6 or more	10 or more	1 or more	2 or more	3 or more	5 or more	8 or more
Elementary Grade.																
Play and Playground Management	1		1			1										
Physical Education and Training	1	1	2			2						1				
Play and Playground, Athletics, Gymnasium	1		1		1			1								
Physical Education and Training, Play and Playground		1	1		1							1				
Totals, Elementary Grade	3	2	5		2	3		1				2				
Secondary Grade.																
Physical Education and Training		5	5			1	4	1							1	1
Physical Education and Training, Play and Playground		4	4			2	2	1					4			
Physical Education and Training, Play and Playground, Athletics	4	11	15		1	2	12	2		1		1		4	4	1
Physical Education and Training, Play and Playground, Athletics, Gymnasium	3	2	5			3	2		1	1		1	1	1		1
Physical Education and Training, Athletics	2	3	5			1	4					1	1	1		1
Physical Education and Training, Athletics, Gymnasium		1	1				1								1	
Athletics, Gymnasium	3		3			1	2					1	1			
Athletics, Cadet Drill	1		1				1									
Athletics	5		5			1	4	1	1	1					1	
Cadet Drill	8		8	2	2	1	2		3	2	1			1		2
Totals, Secondary Grade	26	26	52	2	3	12	34	5	5	5	1	4	7	7	7	6

*One person had less than five full years of schooling beyond an elementary school course.

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TABLE VI.

Music Type.

	Men	Women	Total	Years of academic training beyond high school course*				Private training in solid year units			Years of practical experience in vocation			Years of teaching experience					Years of private teaching			
				1 or more.	2 or more.	3 or more.	4 or more.	1 or more.	2 or more.	4 or more.	2 or more.	3 or more.	6 or more.	1 or more.	2 or more.	3 or more.	5 or more.	8 or more.	2 or more.	4 or more.	6 or more.	8 or more.
Elementary Grade.																						
Vocal	----	3	3	----	2	----	1	----	1	----	----	----	----	----	----	1	1	1	1	----	----	----
Vocal, Instrumental	----	7	7	3	2	2	----	2	5	----	3	2	----	----	2	3	----	----	1	----	----	1
Vocal, Instrumental, Orchestral	----	4	4	1	----	1	1	2	1	1	1	----	1	----	----	----	1	----	----	----	----	1
Instrumental	----	1	1	----	1	----	----	1	----	----	----	----	----	----	----	1	----	----	----	----	----	----
Band	1	----	1	----	----	----	----	----	----	----	----	1	----	----	----	----	1	----	----	----	----	----
Band, Orchestral	1	----	1	1	----	----	----	----	----	----	----	----	1	----	----	----	1	----	----	----	----	----
Totals, Elementary Grade	2	15	17	5	5	3	2	5	7	1	4	3	2	----	2	5	4	1	2	----	----	2
Secondary Grade.																						
Vocal	1	10	11	----	2	3	5	1	1	1	2	----	----	2	----	1	2	4	----	----	1	1
Vocal, Instrumental	6	28	34	2	5	6	16	3	6	5	4	9	2	4	4	4	4	9	4	2	2	3
Vocal, Instrumental, Orchestral	3	52	55	2	10	10	26	6	14	4	6	6	4	5	3	10	5	8	2	4	4	11
Vocal, Instrumental, Orchestral, Band	3	----	3	----	----	1	1	----	----	1	1	----	1	1	----	1	----	----	1	----	----	----
Vocal, Orchestral	1	5	6	----	3	3	----	----	3	----	----	----	----	----	----	----	3	1	----	----	----	1
Vocal, Orchestral, Band	3	----	3	----	----	1	----	----	3	1	1	----	1	----	----	----	----	2	----	----	1	----
Instrumental	----	16	16	2	2	2	8	2	3	3	2	----	4	2	1	2	1	4	3	1	2	3
Instrumental, Orchestral	----	3	3	----	----	----	2	----	----	1	----	1	1	----	----	----	1	----	----	----	1	2
Instrumental, Orchestral, Band	1	----	1	----	----	----	----	----	1	----	----	1	----	----	----	----	----	----	----	----	1	----
Orchestral	1	----	1	----	----	----	----	----	1	----	----	1	----	----	----	----	----	----	----	----	1	----
Orchestral, Band, Choral	2	----	2	----	1	----	1	----	----	----	----	----	1	----	1	----	1	----	----	----	----	----
Orchestral, Band	3	----	3	----	1	----	----	----	1	----	----	1	2	1	----	1	----	----	----	----	----	----
Band	2	----	2	----	----	----	----	----	1	----	----	1	1	----	----	----	2	----	----	----	----	----
Choral	1	----	1	----	1	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----
Totals, Secondary Grade	27	114	141	6	25	26	59	12	34	16	16	20	18	15	9	19	19	28	10	7	13	21

*Six persons had less than high or equivalent schooling.

TABLE VII.

Mixed Types (Not Including Vocational).

	Men.	Women.	Total.	Years of academic training beyond high school course				Years of practical experience in vocation				Years of teaching experience				
				1 or more.	2 or more.	3 or more.	4 or more.	2 or more.	3 or more.	6 or more.	10 or more.	1 or more.	2 or more.	3 or more.	5 or more.	8 or more.
Elementary Grade.																
Free-hand Drawing, Penmanship		1	1		1											1
Manual Training, Household Science, Household Art, Household Economy		1	1		1										1	
Manual Training, Athletics, Gymnasium	1		1	1				1					1			
Manual Training, Instrumental Drawing, Play and Playground, Athletics	1		1	1											1	
Manual Training, Instrumental Drawing, Play and Playground		1	1		1									1		
Free-hand Drawing, Painting, Vocal Music		1	1		1				1				1			
Free-hand Drawing, Painting, Vocal, Instrumental Music		1	1			1								1		
Free-hand Drawing, Painting, Vocal, Instrumental, Orchestral Music		2	2			1	1						1			1
Free-hand Drawing, Painting, Instrumental, Orchestral Music		1	1				1									1
Free-hand Drawing, Painting, Arts and Crafts, Vocal, Orchestral Music		1	1		1								1			
Free-hand Drawing, Vocal, Orchestral Music		1	1			1						1				
Free-hand Drawing, Painting, Arts and Crafts, Vocal, Instrumental, Orchestral Music		1	1			1						1				
Oral and Dramatic Expression, Play and Playground, Athletics, Gymnasium		1	1		1								1			
Oral and Dramatism Expression, Instrumental Music		1	1				1									
Household Science, Household Arts, Household Economy, Stenography and Typing, Bookkeeping		1	1				1									
Totals, Elementary Grade	2	14	16	2	6	4	4	1	2			2	5	2	2	3
Secondary Grade.																
Manual Training, Ironwork, Agriculture	1		1				1	1							1	
Manual Training, Ironwork, Free-hand Drawing, Paint-																

TABLE VII—Continued.

Mixed Types (Not Including Vocational).

	Men	Women	Total	Years of academic training beyond high school course: 1 or more	2 or more	3 or more	4 or more	Years of practical experience in vocation: 2 or more	3 or more	4 or more	5 or more	Years of teaching experience: 1 or more	2 or more	3 or more	5 or more	8 or more
Secondary Grade—Continued.																
Manual Training, Ironwork, Instrumental Drawing, Engineering, Machine Shop Work	3	-----	3	. .	...	1	2	. .	1		1		. .	1	1	
Manual Training, Ironwork, Instrumental Drawing, Engineering, Machine Shop, Machine Design	1	-----	1	-----	..	. .	1	.		1				1		
Manual Training, Agriculture	1	-----	1	----		...	1	1			.			1		
Manual Training, Free-hand Drawing, Instrumental Drawing, Agriculture	1	----	1	...	.	.	1	.		1		1				
Manual Training, Instrumental Drawing, Agriculture Farm Mechanics	1	-----	1	.	.	1	.	. .	.			1				
Manual Training, Instrumental Drawing, Engineering	2	-----	2	. .	.	. .	2	.	.	1						1
Manual Training, Instrumental Drawing, Engineering, Machine Shop, Applied Electricity	1	-----	1	----		.	1	1	.							
Engineering, Machine Shop, Instrumental Drawing	2	-----	2	...		..	2	1	.	.	1					
Engineering, Instrumental Drawing	3	-----	3	.		.	3	...	.	.	1	1				
Free-hand Drawing, Painting, Instrumental Drawing, Architecture	2	-----	2	----		1	1	.	.	1	1				.	
Free-hand Drawing, Painting, Oral and Dramatic Expression	-----	1	1	----		.	1	...								1
Instrumental Drawing, Applied Electricity	1	-----	1	1	. .	...	...	. .	....	1						
Manual Training, Ironwork, Instrumental Drawing, Arts and Crafts, Stenography and Typing, Bookkeeping	1	-----	1	----	. .	. .	1	...	. .	..			1	.	.	
Manual Training, Instrumental Drawing, Stenography and Typing, Bookkeeping	1	-----	1	----	...	..	1	----	. .	1			..	.	.	1
Manual Training, Ironwork, Instrumental Drawing, Stenography and Typing, Bookkeeping	1	-----	1	-----	----	-----	1	-----	-----	----	-----	.	...	...	...	1
Free-hand Drawing, Painting, Instrumental Drawing, Arts and Crafts, Penmanship	2	-----	2	-----	----	-----	2	-----	-----	...	1	1	.....	1	....	...
Free-hand Drawing, Painting, Stenography and Typing, Bookkeeping, Penmanship	-----	1	1	-----	----	-----	1	1	-----	-----	-----	-----	...	-----	...	1
Free-hand Drawing, Painting, Stenography and Typing, Bookkeeping	-----	2	2	-----	1	-----	1	-----	-----	-----	1	----	-----	1	-----	1

TABLE VII—Continued.

Mixed Types (Not including Vocational).

	Men	Women	Total	Years of academic training beyond high school course				Years of practical experience in vocation				Years of teaching experience				
				1 or more	2 or more	3 or more	4 or more	2 or more	3 or more	6 or more	10 or more	1 or more	2 or more	3 or more	5 or more	8 or more
Secondary Grade—Continued.																
Free-hand Drawing, Painting, Arts and Crafts, Vocal, Instrumental, Orchestral Music	----	1	1	----	----	----	1	----	----	----	----	----	----	----	----	1
Free-hand Drawing, Painting, Vocal, Instrumental, Orchestral Music	----	1	1	----	1	----	----	----	----	----	----	----	----	----	1	----
Free-hand Drawing, Painting, Arts and Crafts, Choral Music	----	1	1	----	----	----	1	----	----	----	----	----	----	----	----	----
Free-hand Drawing, Painting, Arts and Crafts, Vocal, Instrumental Music	----	1	1	----	----	----	1	----	----	----	----	----	----	1	----	----
Free-hand Drawing, Painting, Arts and Crafts, Vocal Music	----	1	1	----	----	1	----	----	----	----	----	----	----	----	----	1
Free-hand Drawing, Instrumental Drawing, Vocal, Orchestral Music	----	1	1	----	----	----	1	----	----	----	----	----	----	1	----	----
Free-hand Drawing, Vocal Music	----	2	2	----	1	----	1	----	----	----	----	----	----	----	----	1
Free-hand Drawing, Vocal, Instrumental Music	----	1	1	----	----	----	1	----	----	----	----	----	----	----	1	----
Instrumental Drawing, Vocal, Instrumental and Orchestral Music	----	1	1	----	----	----	1	----	----	----	----	1	----	----	----	----
Manual Training, Ironwork, Instrumental Drawing, Engineering, Machine Design, Athletics	1	----	1	----	----	----	1	----	----	1	----	----	----	----	----	----
Oral and Dramatic Expression, Physical Education and Training, Play and Playground	----	3	3	----	----	----	3	----	----	----	----	----	----	----	----	1
Oral and Dramatic Expression, Physical Education and Training	----	6	6	----	1	----	5	----	1	----	----	----	1	1	1	3
Oral and Dramatic Expression, Physical Education and Training, Play and Playground, Athletics	2	----	2	----	----	----	2	----	----	1	----	----	----	----	----	1
Oral and Dramatic Expression, Physical Education and Training, Athletics	----	1	1	----	----	----	1	----	----	----	----	1	----	----	----	----
Engineering, Instrumental Drawing, Cadet Drill	1	----	1	----	----	----	1	----	----	1	----	----	----	----	----	----
Journalism, Athletics	1	----	1	----	----	----	1	1	----	----	----	----	----	----	----	----
Agriculture, Farm Mechanics, Instrumental Drawing, Cadet Drill	1	----	1	----	*	----	1	----	1	----	----	----	----	----	1	----
Agriculture, Athletics	1	----	1	----	----	----	1	----	----	----	----	----	----	----	----	----

TABLE VIII.

Mixed Types (Including Vocational).

	Men	Women	Total	Years of academic training beyond high school course*				Years of practical experience in vocation			Years of teaching experience				
				1 or more	2 or more	3 or more	4 or more	3 or more	6 or more	10 or more	1 or more	2 or more	3 or more	5 or more	8 or more
Secondary Grade.															
Manual Training, Ironwork, Instrumental Drawing, Machine Shop, Tool, Die, Jig and Metal Pattern Making and Designing, Gas and Steam Engine and Machine Construction, Installation of Machinery and Shop Equipping	1		1			1				1					1
Manual Training, Bench and Cabinet Work, Woodworking Machinery and Wood Manufacture	1		1							1					
Manual Training, Machine Shop, Ironwork	1		1		1					1		1			
Manual Training, Woodworking Machinery and Wood Manufacture, Carpentry	1		1	1					1						
Manual Training, Carpentry	1		1							1				1	
Manual Training, Instrumental Drawing, Carpentry	2		2		1				1	1		1			1
Manual Training, Instrumental Drawing, Bench and Cabinet Work, Carpentry	1		1			1			1						
Manual Training, Instrumental Drawing, Arts and Crafts, Bench and Cabinet Work, Woodworking Machinery and Wood Manufacture	1		1							1					1
Manual Training, House Designing, Woodworking Machinery and Wood Manufacture, Carpentry, Concrete and Cement Work	1		1							1	1				
Manual Training, Applied Electricity	1		1		1					1			1		
Machine Shop	1		1							1					1
Instrumental Drawing, Automobile Construction and Repairing, Machine Shop, Machine Design	1		1	1						1					
Automobile Construction and Repairing	1		1	1						1					
Sewing, Art Needlework, Dress and Costume Design		1	1		1				1				1		
Manual Training, Ironwork, Instrumental Drawing, Salesmanship, Stenography and Typing, Bookkeeping, Engineering	1		1				1		1					1	
Engineering; Machine Shop; Auto Operation, Construction and Repairing; Instrumental Drawing	2		2				2	1		1					

TABLE IX.

Vocational Arts Type.

	Men	Women	Total	Years of academic training in high school: 1 or more	2 or more	3 or more	4 or more	Years of academic training beyond high school course: 1 or more	2 or more	3 or more	4 or more	Years of practical experience in vocation: 4 or more	6 or more	10 or more	15 or more	Teaching experience
Elementary Grade.																
Agriculture and Gardening	1	1	2					1		1			1			1
Dressmaking and Sewing		1	1					1							1	
Dressmaking, Sewing and Needlework		1	1		1										1	1
Sewing, Cooking		1	1		1											1
Totals, Elementary Grade	1	4	5		2			2		1			1		2	3
Secondary Grade.																
Bench and Cabinet Work, Woodworking Machinery and Wood Manufacture	1		1	1										1		
Bench and Cabinet Work	1		1	1									1			
Carpentry and Bench Work	3		3		2		1						1	1	1	
Carpentry, Bench and Cabinet Work, Woodworking Machinery and Wood Manufacture	4		4	2				1						1	3	
Carpentry, Woodworking Machinery and Wood Manufacturing	1		1	1										1		
Carpentry, Bench and Cabinet Work, Ironwork	1		1				1								1	
Bench and Cabinet Work, Woodworking Machinery and Wood Manufacture, Instrumental Drawing	1		1			1									1	1
Bench and Cabinet Work, Wood Turning, Pattern Making	1		1										1			
Pattern Making	3		3	2									1	1	1	
Pattern Making, Wood Turning, Instrumental Drawing	1		1					1						1		
Pattern Making, Wood Turning, Carpentry and Cabinet Work, Woodworking Machinery and Wood Manufacture	1		1	1											1	
Pattern Making, Molding and Other Foundry Work	1		1										1			1
Machine Shop	1		1												1	
Machine Shop, Automobile Repairing and Construction	1		1		1									1		
Machinery Installation, Care and Repair	1		1	1											1	
Blacksmithing	1		1												1	
Applied Electricity	2		2			1								1	1	1

TABLE X.

Grand Totals.

	Men	Women	Total	Less than 5 years beyond elc. sch.	Years of academic training beyond high school course: 1 or more	2 or more	3 or more	4 or more	Private training in solid year units: 1 or more	2 or more	4 or more	Years of practical experience in vocation: 1 or more	2 or more	3 or more	6 or more	10 or more	Years of teaching experience: 1 or more	2 or more	3 or more	5 or more	8 or more
Elementary Grade.																					
Manual and Fine Arts Type	6	11	17	3	1	2	4	7	----	----	----	----	1	1	1	1	1	----	1	5	5
Technical Arts Type	----	7	7	----	1	2	1	3	----	----	----	----	1	1	----	----	1	----	----	1	1
Household Arts Type	----	11	11	----	2	7	1	1	----	----	----	----	----	1	1	1	1	4	2	1	1
Commercial Type	----	4	4	----	1	2	----	1	----	----	----	2	----	----	----	----	1	----	1	----	1
Physical Culture Type	3	2	5	----	----	2	3	----	----	----	----	----	1	----	----	----	2	----	----	----	----
Music Type*	2	15	17	2	5	5	3	2	5	7	1	----	4	3	2	----	----	2	5	4	1
Mixed Types (not including Vocational)	2	14	16	----	2	6	4	4	----	----	----	----	1	2	----	----	2	5	2	2	3
Vocational Arts Type†	1	4	5	2	2	----	1	----	----	----	----	----	----	----	1	2	3	----	----	----	----
Totals, Elementary Grade	14	68	82	7	14	26	17	18	5	7	1	2	8	8	5	4	11	11	11	13	12
Secondary Grade.																					
Manual and Fine Arts Type	78	53	131	9	9	31	27	55	----	----	----	----	15	20	12	18	13	14	26	28	26
Technical Arts Type	26	27	53	----	8	1	7	37	----	----	----	----	7	8	10	11	5	1	3	8	4
Household Arts Type	----	65	65	----	1	8	15	41	----	----	----	----	10	5	4	2	11	5	10	11	13
Commercial Type	50	79	129	7	18	28	26	50	----	----	----	21	16	20	21	11	11	12	17	25	38
Physical Culture Type	26	26	52	1	2	3	12	34	----	----	----	----	5	5	5	1	4	7	7	7	6
Music Type*	27	114	141	25	6	25	26	59	12	34	16	----	16	20	18	----	15	9	19	19	28
Mixed Types (not including Vocational)	46	59	105	----	2	8	16	79	----	----	----	----	9	7	12	10	8	6	22	9	27
Mixed Types (including Vocational)	19	4	23	6	4	4	3	6	----	----	----	----	----	3	5	15	1	2	4	2	5
Vocational Arts Type†	40	20	60	47	5	3	1	4	----	----	----	----	----	7	7	46	10	----	----	----	----
Totals, Secondary Grade	312	447	759	95	55	111	133	365	12	34	16	21	78	95	94	114	78	56	108	109	147
Grand totals, both grades	326	515	841	102	69	137	150	383	17	41	17	23	86	103	99	118	89	67	119	122	159

*Twelve of the 158 persons granted music credentials had two or more years of private teaching experience, 7 four or more years, 13 six or more years, and 23 eight or more years of such experience, making a total of 55 persons who had more than two years of such experience.

†Fourteen of the 65 persons granted vocational arts credentials had no secondary school training, 12 had more than one year of such training, 11 more than two years, 2 more than three years, 10 more than four years, and 16 more than five years of training beyond an elementary school course. Thirty-three of the above persons had more than fifteen years' experience each in their vocations.

PHYSICAL CULTURE TYPE.

Elementary Grade.

Physical Education and Training	3
Play and Playground Management	6
Gymnasium	3
Athletics	4

Secondary Grade.

Physical Education and Training	54
Play and Playground Management	34
Gymnasium	10
Athletics	52
Cadet Drill	15

MUSIC TYPE.

Elementary Grade.

Vocal Music	20
Piano Music	18
Orchestral Music	11
Band Music	2

Secondary Grade.

Vocal Music	138
Piano Music	38
Orchestral Music	88
Band Music	14
Choral Music	4

VOCATIONAL ARTS TYPE.

Elementary Grade.

Agriculture	1
Gardening	1
Dressmaking	2
Sewing	3
Needlework	1
Cooking	1

Secondary Grade.

Bench and Cabinet Work	16
Woodworking Machinery and Wood Manufacture	11
Ironwork	1
Carpentry	15
Instrumental Drawing	3
Wood Turning	3
Pattern Making	3
Free-hand Drawing	1
Molding and other Foundry Work	1
Machine Shop Work	7
Automobile Repair and Construction	5
Machinery Installation, Care and Repair	1
Blacksmithing	1
Applied Electricity	4
Agriculture	2
Shoemaking	1
Printing	10
Bookbinding	1
Journalism	3
Photography	1
Bookkeeping	1
Commercial Economics	1
Commercial Law	1
Dressmaking	11
Sewing	9
Tailoring	7
Needlework	3
Dress and Costume Design	2
Millinery	12
Electrical Salesmanship	1

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Mechanical Drafting	1
Engineering	2
Engine and Machine Construction	1
Installation of Machine and Shop Equipment	1
House Designing	1
Concrete and Cement Work	1
Machine Design	1

The above segregation does not represent the number of credentials granted by the State Board of Education. In many instances two or more subjects were included in a single credential. The actual number of special credentials of each type granted is given in Table XII.

TABLE XII.

Number of Special Credentials of Each Type and Each Grade Granted.*

	Elementary	Secondary
Manual and Fine Arts	17	131
Technical Arts	7	53
Household Arts	11	65
Commercial	4	129
Music	17	141
Physical Culture	5	52
Vocational Arts	5	60
Manual and Fine Arts and Vocational Arts	--	15
Manual and Fine Arts and Household Arts	1	9
Manual and Fine Arts and Physical Culture	3	6
Manual and Fine Arts and Technical Arts	--	21
Manual and Fine Arts and Commercial	1	13
Manual and Fine Arts and Music	8	18
Technical Arts and Physical Culture	1	17
Music and Commercial	--	4
Technical Arts and Music	1	---
Music and Physical Culture	--	1
Physical Culture and Commercial	--	3
Household Arts and Music	--	4
Household Arts and Physical Culture	--	2
Household Arts and Commercial	1	2
Technical Arts and Vocational Arts	--	5
Household Arts and Vocational Arts	--	1
Manual and Fine Arts, Technical Arts and Vocational Arts	--	1
Manual and Fine Arts, Commercial and Vocational Arts	--	1
Manual and Fine Arts, Technical Arts and Physical Culture	--	1
Technical Arts, Commercial and Physical Culture	--	1
Commercial, Physical Culture and Music	--	1
Music, Technical Arts and Physical Culture	--	2
Totals	82	759
Grand total		841

*A number of temporary special credentials have been reissued; also, in a few cases both elementary and secondary credentials have been granted to the same individual, and in some other cases a second credential has been granted in order to qualify the individual to teach a subject not included in the previous credential issued. Thus the total number of credentials listed above does not represent the total number of individuals having received special credentials, but somewhat exceeds that number.

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DISCUSSION OF TABLE I.

A reference to Table I, pages 262–263, will reveal the fact that the board has generally accepted no equivalents for the first four years of schooling beyond an elementary school course upon the part of all applicants for special credentials of the Manual and Fine Arts Type.

Of the 148 persons who secured credentials of this type, but 12 had less than five full years of schooling beyond an elementary school course. These were teachers with years of successful practical and teaching experience, who held special certificates and were in the service in the state of California. In each case where a person fell short of the required eight years of schooling beyond an elementary school course, sufficient practical experience in the occupation and teaching experience in the subject were required to make up the deficiency in school training, but in no case was practical or teaching experience given more than one-half credit in making up such deficiency.

Of the 148 persons granted this type of credential, 69, or almost half, had more than two years of practical experience, and 119, or 80 per cent, had teaching experience ranging from one or more to eight or more years. The amount of teaching experience of the persons granted the credential in manual and industrial subjects was about equal to that of the persons granted the credential in fine arts subjects, while about 63 per cent of the former had in addition more than two years of practical experience in the special line.

Only six of the 86 persons receiving the credential in manual arts subjects were women, while but ten of the 68 persons receiving the credential in fine arts were men.

DISCUSSION OF TABLE II.

Of the 53 persons who received credentials of the Technical Arts Type, 37 had four or more years of collegiate training, and only one person who did not have four years of such training was granted a credential in engineering and he had years of practical experience as an engineer.

Of the 11 persons granted credentials in agriculture, but two had less than a full four years collegiate course and these likewise had both practical and teaching experience.

Of the eight persons granted secondary credentials in oral and dramatic expression, but three had less than four years of collegiate training. Of these three, one had from six to ten years and two had more than ten years of practical experience; and one had more than three years, one more than five years, and one more than eight years of teaching experience.

Twenty credentials were granted in library craft, technique and use. Ten of the persons receiving these credentials had full collegiate courses;

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three had more than three years and seven had more than one year of collegiate work. Those persons having less than the full collegiate requirement had full equivalents in practical and teaching experience, as shown by a reference to Table II, page 264.

Of the eight persons receiving the credential in oral and dramatic expression, but two were men. All of the persons receiving the credential in library craft, technique and use, were women, and all of the persons receiving the credential in engineering were men.

In general, Table II shows that it is possible to maintain a much higher scholastic standard for credentials of the Technical Arts Type than for the Manual and Fine Arts Type.

DISCUSSION OF TABLE III.

Table III, page 265, shows that most of the teachers prepared in household science are also prepared in household art, since 69 of the 76 credentials of Household Arts Type granted were in both the science and the art of the subject.

Of the 65 persons granted the secondary credential in this subject, 41 had completed a full collegiate course, 15 had completed more than three years, eight more than two years, and one more than one year of such a course. All of the persons who secured the credential in household science or in household art and who had less than four years of schooling beyond a high school course were experienced teachers in this field, and most of them were already in the service in this state.

Here, again, the scholastic standard maintained by the board is much higher than that maintained for the Manual and Fine Arts Type of credential, and fully as high as that maintained for the Technical Arts Type.

DISCUSSION OF TABLE IV.

As shown by Table IV, page 266, fifty of the 133 credentials granted in commercial subjects were secured by men and 83 by women. The standard of academic scholarship maintained for this credential was about equal to that maintained for the Manual and Fine Arts Type. In view of the fact that most of the background subjects in the commercial field have been taught for years in the higher institutions, it would seem that the standard of academic scholarship in this field should be higher than it is. However, until very recently no institution of collegiate grade in this state attempted to prepare persons for teaching commercial subjects. The supply of teachers for this field has been secured largely from the teaching force of private commercial schools. In the past the standard of academic scholarship maintained by such schools was not especially high, their main function being to prepare for the commercial occupations alone.

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Of the persons securing the commercial credential, only seven had less than five years of schooling beyond an elementary course of instruction. All of these persons had long years of successful teaching experience in commercial subjects and most of them had extensive practical experience in their various special fields.

Of the 133 persons receiving this credential, 106 had teaching experience—39 having had more than eight years, 25 more than five years, 18 more than three years, 12 more than two years and 12 more than one year. Ninety-one of these persons had practical experience—11 having had more than ten years, 21 more than six years, 20 more than three years, 16 more than two years, and 23 more than one year.

The above figures show clearly that there is growing up an insistent demand for teachers of commercial subjects with practical experience in the commercial field. This is entirely natural since this subject, as taught in the secondary schools, is fundamentally a vocational subject.

DISCUSSION OF TABLE V.

Of the five persons granted elementary credentials of the Physical Culture Type, three had the complete academic requirement of three years of training beyond a high school course; two had but two years of such training, although both of these persons had teaching experience, and one had more than two years of practical experience in the special subject.

Of the 52 persons granted secondary credentials of the Physical Culture Type, 26 were men and 26 were women. Thirty-four had four or more years of schooling beyond a high school course, 12 three or more years, three two or more years and two one or more years, while one had less academic training.

The academic scholarship of the persons who received this type of credential appears to be about equal to that of those who received the Technical and Household Arts Types.

DISCUSSION OF TABLE VI.

One hundred fifty-eight persons were granted credentials of the Music Type. Of this number 29 were men and 129 were women.

Sixty-one of these had more than four years of training beyond a secondary school course, 29 had more than three years, 30 had more than two years, 11 had more than one year, 21 had more than a secondary education, while six had less than a secondary school training. However, 16 had more than four years, 34 more than two years and 12 more than one year of solid private training. The addition of this private training to the school training increases the total educational qualifications of these persons far beyond that expressed in terms of school training, as shown in Table VI, page 268.

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Twenty of the above persons had more than six years, 23 more than three years and 16 more than two years of practical experience in music as a vocation.

Of the 158 persons who received this credential, 102 had more than one year each of public school teaching experience. Of these, 29 had more than eight years, 23 more than five years, 24 more than three years, 11 more than two years, and 15 more than one year of such experience. Fifty-five had more than two years each of experience as private teachers, 23 had more than eight years, 13 more than six years, seven more than four years, and 12 more than two years.

Here, again, the average academic training of those receiving the credential is much lower than the average for those receiving credentials of the Household Arts and Technical Arts types. However, the schooling and private instruction and the practical and teaching experience, taken together, raise the qualification of this group to as high a standard as that of any other. The academic schooling of musicians is usually badly broken up. In many cases they have not completed any particular course in a secondary school. This is probably due to the fact that in years past they either had to give up their musical training during the high school period or their chance of graduating from such a school.

DISCUSSION OF TABLE VII.

But few generalizations can be made upon the mixed type as set forth in Table VII, page 269.

The only combinations that appear to repeat themselves are those to be found in the Manual and Fine Arts and Technical Arts types and in Oral and Dramatic Expression and Physical Education.

Exclusive of such credentials as contain vocational subjects, there were granted 121 credentials of mixed types. Of these 48 were granted to men and 73 to women. Sixteen of these were of elementary and 105 of secondary grade.

Of the persons who received the secondary grade, 79, or 75 per cent, had more than four years, 16 more than three years, eight more than two years, two more than one year and *none* less than one year of schooling beyond a high school course. However, to balance this, the total number having had practical experience is relatively much smaller. Only ten of the 105 had more than ten years of practical experience, 12 more than six years, seven more than three years, and nine more than two years, making a total of but 38 persons with practical experience.

Seventy-two of the 105 had teaching experience. Of these, 27 had more than eight years each, nine more than five years, 22 more than three years, six more than two years, and eight more than one year of such experience.

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DISCUSSION OF TABLE VIII.

Twenty-three credentials of mixed types which included vocational subjects were granted. Of these 19 were secured by men and four by women.

The standard of academic scholarship for this group appears to be a trifle lower than that of the Manual and Fine Arts group, but all of these persons had more than three years of practical experience. Of the 23 persons, six had more than four years of academic training beyond a high school course, three had more than three years, four more than two years, four more than one year, and six persons had less than one year beyond a high school course. Fifteen had more than ten years of practical experience, five more than six years and three more than three years, which accounts for all who received the credential. Five had more than eight years of teaching experience, two more than five years, four more than three years, two more than two years, and one more than one year. More than half of these persons were in the teaching service in this state and consequently held certificates in manual training. These certificates were previously granted largely upon practical experience, and their holders had demonstrated their ability to teach the subject satisfactorily.

DISCUSSION OF TABLE IX.

The statistics relating to the credentials of the Vocational Arts Type granted will be found in Table IX, pages 276–277.

But five elementary credentials of this type were granted. One of these, a credential in agriculture and gardening, was granted to a man and the remainder were granted to women. One of these persons had more than three years of training beyond a high school course, two more than one year of such training, and two had less than three years of secondary schooling. Two of these persons had more than fifteen years of practical experience, one more than six years, and the other two had teaching experience in their subjects.

Sixty secondary credentials in vocational subjects were granted. Of these, 40 went to men and 20 to women. Four of the 60 had more than four years of schooling beyond a high school course, one more than three years, three more than two years, five more than one year, and ten had completed a secondary school course of four or more years, making a total of 23 persons who had a high school education or more. Two persons had three or more years, nine two or more years, and 12 one or more years of secondary school training, while 14 had less than one year of training beyond a public elementary school course.

Thus, it will be seen, almost one-fourth of the persons granted the credential of the Vocational Arts Type had practically no schooling beyond that secured in the elementary grades. One-fifth of the total

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number had little schooling beyond that secured in the first year of a high school course, and only 38 per cent had a high school education or more. On the other hand, these persons all had a large amount of practical experience to offset this lack of academic schooling. None had less than four years of such experience; 31, or more than half, had more than fifteen years of practical experience; 15, or one-fourth, had more than ten years; seven had more than six years, and five had more than four years of such experience. Of the 60 persons, ten also had teaching experience. This teaching experience was largely confined to regular elementary school work.

DISCUSSION OF TABLE X.

Table X, page 278, gives the totals of the analyses of credentials of the various types granted. This table shows that there were 82 credentials of elementary grade granted, and that 14 of these went to men and 68 to women; that there were 759 credentials of the secondary grade, of which 312 went to men and 447 to women; that there were 841 credentials of elementary and secondary grade granted, and that 326 of these went to men and 515 to women.

Of the 82 persons who received elementary credentials, 18 had more than eight years of schooling beyond an elementary school course, 17 more than seven years, 26 more than six years, 14 more than five years, and six less than five years. Four of these persons had more than ten years of practical experience in their occupations, 5 more than six years, eight more than three years, eight more than two years, and two more than one year. Twelve had more than eight years of teaching experience, 13 more than five years, 11 more than three years, 11 more than two years, and 11 more than one year.

Of the 759 persons who received secondary credentials, 365 had more than eight years of training beyond an elementary school course, 133 more than seven years, 111 more than six years, 55 more than five years, and 75 less than five years. Of these persons, 114 had more than ten years each of practical experience in their occupations, 94 more than six years, 95 more than three years, 78 more than two years, and 21 more than one year. One hundred forty-seven had more than eight years of teaching experience, 109 more than five years, 108 more than three years, 56 more than two years, and 78 more than one year.

Of the 841 persons who were granted special credentials, 383, or 45 per cent, had more than eight years of training beyond an elementary school course; 150, or 18 per cent, had more than seven years; 137, or 16 per cent, had more than six years; 69, or 8 per cent, had more than five years, and 102, or 12 per cent, had less than five years.

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Of the above, 118 had more than ten years of practical experience, 99 more than six years, 103 more than three years, 86 more than two years, and 23 more than one year. One hundred fifty-nine had more than eight years of public school teaching experience, 122 had more than five years, 119 had more than three years, 67 more than two years, and 89 more than one year, making a total of 556 persons, or 66 per cent, who had teaching experience.

The average of scholastic scholarship is lowered by the inclusion of the Vocational Arts and Music types of credential. As will be observed by a glance at Table X, many of the candidates for the music credential had private training, and practical experience was substituted for the lack of academic training upon the part of those who received credentials in vocational subjects.

SOME DIFFICULTIES OF THE SPECIAL CERTIFICATE PROBLEM.

It is not only desirable, but it is necessary, to maintain a high standard for certification in special subjects. In securing a position, the holder of a credential or certificate in special subjects uses it as evidence of his general educational qualifications and also of his superior knowledge in the special subject.

In order, then, to protect employing boards, the State Board of Education must maintain a high general standard of scholarship, and it must also maintain a very high standard of scholarship in the special field. With the standard of scholarship maintained by your honorable body in the special subjects, it is exceedingly difficult for any person to secure certification in more than one, or, at most, in more than two special subjects. While a high standard of scholarship in the special field is desirable, it would be possible to maintain a standard so high that a sufficient number of persons could not be supplied for the service. In this case the salary schedule of special teachers would naturally become unduly high. In short, it would be possible to maintain such a professional standard as would artificially increase the cost of instruction in the special fields to the extent that these subjects would not be maintained in the high schools of the state. However, the standard which you at present maintain is not sufficiently high to bring about this situation. At the same time certain difficulties have arisen which are very real.

I have pointed out elsewhere in this report that 109 of the high schools in this state employ six or less teachers each. These high schools as a rule are located in rural communities. Courses of instruction in the special subjects are perhaps more essential in this type of school than in the city school, because the pupils attending the city schools have more opportunities of getting into touch first-hand with the special fields of learning than do the pupils of the rural districts.

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I am sure that you will agree that the rural high school should maintain special courses in music, in art, in household arts, and in industrial arts or agriculture or in both. At present nearly all of these high schools maintain courses in commercial subjects.

Thus we have six special subjects, most, if not all, of which seem to be desirable for each high school in this state. Assuming that a special teacher can handle but one of these subjects, in order to cover the ground it would be necessary to have the services of six special teachers. This of course would be manifestly impossible when we take into consideration the fact that the special teacher may not teach any subjects other than those enumerated in his certificate.

Under the present method of certification there is no possible solution for this situation. The small high school has to employ a sufficient number of teachers with regular high school certificates to carry on all of the regular high school work. If, after this has been done, sufficient money remains, one or more special teachers may be employed. Usually a high school of this type can not afford to employ more than one or two special teachers. If the other special subjects are maintained they have to be taught by teachers holding regular certificates. In most cases these teachers have had no preparation for handling this special work, nor do they desire to teach it, but too often it is the only condition under which the subjects can be maintained.

Certification in Major and Minor Subjects Suggested.

Two possibilities leading to a partial solution of this problem suggest themselves. The first of these is a change in your regulations governing special certification, which shall provide for the granting of certificates in major and minor subjects. Should such a change be made a subject should be listed as a major subject only when the candidate has a complete grasp of the same and when he is fully qualified to accept a position as a full-time teacher in the special subject; and a subject should be listed as a minor subject when the candidate has a sufficient grasp of the same to teach a class in it while under employment as a teacher of one or more of the major subjects.

The danger that a holder of such a certificate might pose as a master of a minor subject may be obviated by providing that where a certificate in special subjects segregates the same as major or minor subjects, such certificate shall authorize the holder thereof to accept full-time employment only to teach one or more of the major subjects or one or more of the major and minor subjects combined; and by providing, further, that the holder of such a certificate shall not be authorized to accept a position to teach, nor may he be permitted to teach under the authority of such certificate, minor subjects for more than half-time, nor may the

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holder of such a certificate be permitted to teach courses other than elementary, first-year, or first-unit courses in such minor subjects in any public high school in the state.

This partial solution of the problem is suggested by the fact that many persons have applied for certification in a second special subject, and while they are not able to qualify fully under the standard maintained by your honorable body for the special subject, yet they have a fair knowledge of the same, in fact, a much greater knowledge than the average regular high school teacher who will probably be called upon to teach the subject if the special teacher can not be certificated in it. The change suggested here can be made by your honorable body without any additional legislation. I would therefore recommend that you take this matter under advisement as soon as possible.

Suggestion That Special Teachers Be Authorized to Teach Certain Regular Branches.

The second suggestion is that provision be made giving the State Board of Education the power to provide general regulations under which institutions granting secondary credentials in special subjects may be authorized to include in the credential such regular high school subjects as the candidate is competent to teach—said competency to be based upon a certain specified number of units of college credit in each of the subjects so added; that the State Board of Education be authorized to write into the secondary credentials in special subjects issued by it such of the common high school branches as the candidate may be competent to teach, and that county or city and county boards of education be authorized to grant special certificates upon these credentials.

This would not add to the burden of handling the special credential problem by institutions or by the State Board of Education. It has been customary to have filed in this office a transcript of the work done in college by the applicants for special certification. These transcripts give a clear record of the units of work covered in each of the high school branches with the standing achieved therein.

As the matter now stands, the holder of a regular high school certificate may, under the law, teach any subject, regular or special, that may be maintained in any high school in the state. Thus a regular high school teacher trained in one field of knowledge may, and often does, accept employment to give instruction in a field remote from the one in which he has had his college training. Teachers frequently teach in the high school subjects in which they have had no college training whatever. It will therefore be seen that the extending of the privilege of teaching certain specified high school subjects to special teachers, if safeguarded as suggested above, will be less likely to lead to abuse than the present method of handling the general certification.

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issued by your honorable body in the Technical Arts, the Household Arts and in Physical Education were granted to persons who had more than the usual college training. Indeed, in many cases the special training was secured after the individual had graduated from a reputable college or university.

Specific instances have occurred during the last year which lead me to believe that it would sometimes be a protection to the pupils of the high schools of this state if certain special teachers were authorized to teach some of the high school branches. I have in mind one case in which a special credential was granted to a college graduate who had two years of postgraduate work at a university, making a total of six years of collegiate training. The high school board employing this young man as an agriculture teacher desired to have him teach the botany class. Transcripts of courses taken by this candidate in the two institutions mentioned showed that he had nearly forty college credits in botany. Under the law you are not authorized to grant to him the privilege of teaching that subject and it was necessary to so notify the school employing him. As a result, botany was taught in that school by a regular high school teacher who had no college training whatever in the subject. This is not an isolated case; it represents a situation that is constantly arising in the small high schools in this state.

Your attention is directed to the fact that, taken as a whole, the household arts teachers and the agriculture teachers who have completed college courses are about the only persons employed in the California schools who have had sufficient training in the subjects of biology and organic chemistry to handle them successfully in the high school. As a rule the household arts teacher, trained in a reputable college, has had much more chemistry than the average high school teacher, and frequently more than those teachers who made this subject a major in their college course. Further, most of the engineers to whom you have granted special credentials submitted evidence of having had training in mathematics and science which was far in excess of the training possessed by most of the high school teachers.

During the last year your Commissioner was frequently consulted by high school principals who desired to employ teachers of special subjects—agriculture, manual training, or household arts—who could teach something besides their specialty. These requests invariably came from small rural high schools that were very anxious to introduce the special subjects. In most cases they failed to find teachers qualified to handle both special and general subjects. In some instances they did not introduce special work, in others regular teachers, indifferently trained in the special subjects, were employed to do the work.

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In concluding this statement, I wish to say that while the elementary school aims to provide a common education for all children, the high school aims to provide many special courses of instruction which will fit many types of minds and will prepare for many different future occupations. Fundamentally, the secondary school is a school of special subjects, all subjects taught therein being special, and a high degree of scholarship upon the part of the teacher of each of these subjects is, upon the whole, equally important; but under the present system of general certification the children who pursue the various high school branches are not always assured of having a teacher who is master of his subject. The only subjects safeguarded under our present system of certification are the new, so-called special, subjects, and they are not safeguarded from the holder of the general high school certificate, who is in a favored position so far as employment is concerned.

Our present certification law does not square with itself. It divides the teachers into two groups. The persons composing one group are authorized to teach all things, whether they know them or not, and the persons of the other group are not permitted to teach all of those subjects which they do know.

This law will square with itself when the special teacher, like the regular teacher, is permitted to teach any of the high school subjects, whether he knows them or not; or, better, when both the regular and special teachers are permitted to teach only the subjects which they know.

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PART V.

STATISTICAL TABLES.

KINDERGARTEN SCHOOLS.

TABLE No. 1. Number of Counties Maintaining, Teachers, Pupils Enrolled, Avera Daily Attendance, and Average Number of Days Schools We Open.

TABLE No. 2. Average Salary Paid Teachers 1915, Average Salary Paid Supe visors of Schools, Principals and Teachers.

TABLE No. 3. Receipts, Expenditures, and Valuation of Property.

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KINDERGARTEN SCHOOLS.

TABLE No. 1.

Statistics of Kindergarten Schools, Showing Number of Teachers, Enrollr Average Attendance, and Average Number of Days School was Maintaine Counties.

Counties	Total number teachers, all women		Total enrollment				Average daily attendance		Ave numl days was tai
			1915		1916				
	1915	1916	Boys	Girls	Boys	Girls	1915	1916	1915
Alameda	44	56	1,434	1,382	1,781	1,768	1,157	1,724	189
Contra Costa	2	4	57	53	121	139	63	113	*97
El Dorado	1	1	12	25	14	17	26	24	165
Fresno	3	3	70	100	86	98	96	99	188
Humboldt	1	1	18	21	12	21	20	25	178
Imperial	4	3	65	70	92	88	95	88	167
Kern	-----	10	-----	-----	277	258	-----	261	-----
Lassen	-----	1	-----	-----	9	17	-----	19	-----
Los Angeles	304	350	4,458	4,475	4,980	5,165	5,212	5,904	174
Orange	7	10	184	219	252	255	217	269	169
Riverside	8	14	123	128	196	194	152	231	170
Sacramento	27	32	491	461	535	550	414	491	178
San Bernardino	7	13	113	120	265	243	156	320	175
San Diego	10	13	459	464	507	539	403	456	195
San Francisco	7	11	271	304	456	441	270	430	205
San Luis Obispo	-----	1	-----	-----	15	18	-----	27	-----
San Mateo	3	4	97	78	148	111	99	135	200
Santa Barbara	8	8	174	133	195	145	151	153	200
Santa Clara	1	5	19	31	156	167	26	163	194
Santa Cruz	1	1	30	25	42	22	23	25	188
Siskiyou	-----	1	-----	-----	10	18	-----	16	-----
Solano	-----	1	-----	-----	32	22	-----	43	-----
Tulare	1	1	20	21	16	23	24	21	180
Ventura	2	3	64	60	84	77	64	95	200
Yolo	1	1	14	26	19	25	23	22	190
Totals	442	543	8,173	8,196	10,300	10,421	8,691	11,154	†180

*First year of school.
†Average.

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TABLE No. 2.

Statistics of Kindergarten Schools, Showing Average Annual Salary Paid Teachers. All Women.

Counties	Average salary paid teachers, 1915	Average annual salary paid, 1916					
		No.	Supervisors	No.	Principals	No.	Teachers
Alameda	$1,044 87	----	----------	15	$882 34	41	$1,000 36
Contra Costa	1,080 00	----	----------	----	----------	4	1,050 00
El Dorado	637 50	----	----------	----	----------	1	720 00
Fresno	674 16	----	----------	1	850 00	2	738 12
Humboldt	700 00	----	----------	----	----------	1	800 00
Imperial	883 33	----	----------	----	----------	3	900 00
Kern	----------	----	----------	1	1,000 00	9	758 06
Lassen	----------	----	----------	----	----------	1	675 00
Los Angeles	817 21	----	----------	171	938 39	179	715 53
Orange	603 40	----	----------	----	----------	10	882 27
Riverside	615 00	----	----------	7	754 00	7	452 00
Sacramento	718 74	1	700 00	----	----------	31	589 94
San Bernardino	815 00	----	----------	----	----------	13	594 71
San Diego	1,264 00	----	----------	----	----------	13	1,155 46
San Francisco	874 00	----	----------	----	----------	11	882 30
San Luis Obispo	----------	----	----------	----	----------	1	550 00
San Mateo	900 00	----	----------	----	----------	4	900 00
Santa Barbara	756 25	1	1,000 00	----	----------	7	721 42
Santa Clara	800 00	----	----------	2	793 90	3	673 33
Santa Cruz	800 00	----	----------	----	----------	1	800 00
Siskiyou	----------	----	----------	----	----------	1	525 00
Solano	----------	----	----------	----	----------	1	840 00
Tulare	900 00	----	----------	----	----------	1	900 00
Ventura	812 50	----	----------	----	----------	3	710 83
Yolo	665 00	----	----------	----	----------	1	665 00
Totals	*$818 01	2	*$850 00	192	*$660 87	349	*$588 77

*Average.

NOTE.—Plan of giving salary of teachers changed for 1916. Supervisors, principals and teachers given for this year.

TABLE No. 3.

Statistics of Kindergartens, Showing Receipts, Expenditures, Valuation of Property.

Counties	Receipts from all sources, including balance on hand		Total expenditure for all purposes		Total valuation of all property	
	1915	1916	1915	1916	1915	1916
Alameda	$40,096 60	$66,739 34	$40,141 89	$63,395 34	$4,823 00	$18,510 00
Contra Costa	3,608 26	6,152 84	2,806 91	4,878 85	----------	----------
El Dorado	1,081 40	830 85	917 51	830 85	113 00	100 00
Fresno	2,885 15	3,813 40	2,454 54	2,479 96	3,725 00	3,739 00
Humboldt	1,279 96	1,369 12	1,194 31	966 95	200 00	400 00
Imperial	5,400 70	8,559 19	3,821 68	4,636 68	136 00	401 00
Kern	----------	15,591 67	----------	13,925 97	----------	3,684 00
Lassen	----------	903 91	----------	867 63	----------	90 00
Los Angeles	309,734 62	436,764 68	258,980 36	334,720 31	----------	2,600 00
Orange	9,598 97	14,913 20	6,143 79	11,706 16	6,640 00	----------
Riverside	5,719 13	12,526 56	4,418 64	8,544 41	14,000 00	14,000 00
Sacramento	19,864 10	30,676 80	19,864 10	28,098 88	27,300 00	27,300 00
San Bernardino	10,941 52	24,108 85	5,043 59	16,398 72	----------	1,555 00
San Diego	16,828 37	26,398 13	14,245 90	16,012 88	----------	1,044 00
San Francisco	7,067 69	14,516 37	7,067 69	14,516 37	2,550 00	4,450 00
San Luis Obispo	----------	690 49	----------	724 75	----------	30 00
San Mateo	4,709 98	5,995 90	3,552 87	4,995 15	1,041 44	5,420 00
Santa Barbara	11,646 73	11,036 84	9,412 44	8,714 22	15,500 00	15,500 00
Santa Clara	1,546 90	5,452 96	1,277 35	5,142 18	4,300 00	8,440 00
Santa Cruz	2,000 00	2,173 13	1,613 77	1,859 18	----------	----------
Siskiyou	----------	846 88	----------	745 40	----------	175 00
Solano	----------	2,328 55	----------	1,975 49	----------	1,230 00
Tulare	1,800 25	2,288 69	1,418 81	2,265 12	110 00	160 00
Ventura	2,600 08	4,246 42	1,709 76	2,857 90	5,100 00	75 00
Yolo	1,213 08	1,242 31	769 70	1,084 36	70 00	285 00
Totals	$459,623 44	$700,162 08	$386,955 61	$550,840 51	$95,108 00	$109,488 00

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ELEMENTARY SCHOOLS.

PRIMARY AND GRAMMAR (EIGHT GRADES).

TABLE No. 4. Number of School Districts, Number Union, Number Suspended, Number of Teachers Allowed on Attendance, Number of Teachers Employed—Men and Women for 1915 and 1916.

TABLE No. 5. Number of Boys and Girls Enrolled for 1915 and for 1916 and total; Number of Postgraduate Pupils in Elementary Schools—Boys and Girls.

TABLE No. 6. Number of Pupils Enrolled in Each Grade of the Elementary Schools—Boys and Girls—1915 and 1916, and Postgraduate Pupils Enrolled.

TABLE No. 7. Number of Graduates—Boys and Girls for 1915 and 1916; Number of Postgraduate Graduates—Boys and Girls for 1916; Average Daily Attendance—1915 and 1916—and Average Number of Days Schools Were Open.

TABLE No. 8. Amount of Money Apportioned by the State to the Several Counties—1915 and 1916. Total Receipts by the School Districts of State, County, District Money for 1915 and 1916.

TABLE No. 9. Total Expenditure, Total Valuation of School Property, and Average County Tax Rate for Schools for 1915 and 1916.

TABLE No. 10. Average Salary of Teachers—Men and Women for 1915. Average Salary of Supervising Principals—Men and Women; Principals—Men and Women; Regular Teachers—Men and Women—1916. Number of Each Given.

TABLE No. 11. Average Salary Paid Supervisors of Subjects—Men and Women; Teachers of Special Subjects—Men and Women for 1916.

TABLE No. 12. Bonded Indebtedness Outstanding. Special Tax Rate for Maintenance and for Buildings and Interest (Average Rate) paid on Bonds—1915 and 1916.

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STATISTICS.

TABLE No. 4.

Number of Districts and Number of Teachers.

Counties	Number school districts at close of year 1915	Number school districts at close of year 1916			Number teachers allowed on average attendance		Total number teachers actually employed in each county			
		Regular active	Union	Suspended	1915	1916	1915		1916	
							Men	Women	Men	Women
Alameda	44	43		1	1,014.85	1,038.71	128	994	135	1,000
Alpine	3	3			3	3		3		3
Amador	38	40		3	56.17	58.82	6	55	8	55
Butte	75	77		1	151	149	13	151	15	152
Calaveras	49	47		3	62.62	63.59	14	49	13	49
Colusa	35	33		3	48.69	51.70	10	44	13	44
Contra Costa	56	55			188.15	202.29	13	187	16	195
Del Norte	16	16			20	22	4	17	5	18
El Dorado	55	51		5	58.06	57.50	10	49	6	52
Fresno	144	145		1	506.03	529.01	59	467	59	482
Glenn	42	38	1	2	60.16	60.02	10	53	13	51
Humboldt	105	105		3	192	197	20	173	20	184
Imperial	51	50			105	107	9	141	15	147
Inyo	24	23		1	32	32	2	29	3	31
Kern	93	95			209.55	216.67	15	220	20	225
Kings	41	40			97.32	101.25	12	93	16	89
Lake	39	38		1	46.43	46.33	7	46	6	40
Lassen	43	43			51	54	13	36	15	39
Los Angeles	152	156		1	2,395.90	2,456.44	325	2,778	271	2,773
Madera	46	43	1	1	70.09	72.10	9	67	6	73
Marin	45	45			96.86	102.88	6	106	6	106
Mariposa	29	29			28.03	29	1	27	1	30
Mendocino	121	123	1	9	163	172	13	145	18	145
Merced	62	57	2	1	112.03	120.49	13	108	14	114
Modoc	40	41			52	53	11	42	12	41
Mono	11	10	2		12	12	3	7	2	10
Monterey	88	82	2	4	138.89	140.32	9	132	10	134
Napa	51	48		1	87.80	89.78	4	85	5	81
Nevada	45	44		2	83	82	5	71	5	71
Orange	50	45	2		215.60	218.56	28	238	29	243
Placer	52	51			86.82	93.62	11	79	13	88
Plumas	32	32		2	35	36	3	31	3	31
Riverside	68	66	2	1	194.38	200.12	21	211	27	217

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Sacramento	74	71	2	1	284.76	297.82	17	331	24	364
San Benito	34	34	1	4	47.24	48.63	4	89	4	43
San Bernardino	75	74	1		290.12	308.15	21	323	29	349
San Diego	113	117		6	382.50	378.73	28	391	36	408
San Francisco	1	1			1,293	1,319	53	1,165	62	1,241
San Joaquin	87	85	1		249.46	265.26	32	228	33	242
San Luis Obispo	93	92		2	131	134	14	131	15	131
San Mateo	36	34		3	134	142	12	123	11	137
Santa Barbara	65	62	1		125.09	132.20	19	124	18	141
Santa Clara	83	78		1	345.68	355.19	22	363	27	361
Santa Cruz	52	50	1	2	119.19	121.86	7	134	9	138
Shasta	102	104		4	125	128	9	115	11	115
Sierra	17	16		2	20	20	3	18	3	18
Siskiyou	90	84	4	2	129	132	18	103	21	106
Solano	52	50			114.78	117.92	7	116	8	114
Sonoma	150	143		5	270.14	275.12	28	252	25	261
Stanislaus	62	57		2	183.89	184.75	17	187	20	187
Sutter	34	34			48	49	8	44	7	47
Tehama	66	65		2	96.15	95.28	16	88	15	90
Trinity	25	24		1	26	27	1	25	2	24
Tulare	126	123		1	263.72	272.79	30	248	29	262
Tuolumne	33	32			55	54	7	46	7	47
Ventura	55	52			110.86	117.13	9	115	6	118
Yolo	43	42	3	3	71.99	73.97	6	75	9	72
Yuba	39	39			56	57	7	49	7	51
Totals	3,452	3,377	27	87	11,646	11,975	1,202	11,767	1,238	12,080

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TABLE No. 5.

Total Enrollment of Pupils by Sex and by County, Including Elementary and Postgraduate Elementary Schools.

Counties	Elementary schools						Postgraduate elementary schools, 1916*		
	Boys		Girls		Total				
	1915*	1916	1915	1916	1915	1916	Boys	Girls	Total
Alameda	21,994	21,758	19,321	19,497	41,315	41,255	-----	-----	-----
Alpine	23	23	13	8	36	31	-----	-----	-----
Amador	767	797	695	740	1,462	1,537	2	5	7
Butte	2,349	2,306	2,130	2,033	4,479	4,339	18	15	33
Calaveras	740	785	755	729	1,495	1,514	-----	-----	-----
Colusa	624	650	563	591	1,187	1,241	4	1	5
Contra Costa	3,369	3,555	3,297	3,473	6,666	7,028	-----	1	1
Del Norte	260	299	265	261	525	560	-----	8	8
El Dorado	547	521	565	529	1,112	1,050	5	12	17
Fresno	9,400	9,529	8,577	8,815	17,977	18,344	-----	4	4
Glenn	814	790	816	799	1,630	1,589	10	5	15
Humboldt	3,080	2,999	2,704	2,751	5,784	5,750	4	6	10
Imperial	2,260	2,220	1,893	2,043	4,153	4,263	8	4	12
Inyo	431	458	406	414	837	872	-----	-----	-----
Kern	3,359	3,519	3,120	3,241	6,479	6,760	-----	2	2
Kings	1,798	1,896	1,639	1,738	3,437	3,634	-----	-----	-----
Lake	487	468	478	492	965	960	3	1	4
Lassen	609	654	573	604	1,182	1,258	5	8	13
Los Angeles	51,440	52,481	47,280	48,328	98,720	100,809	-----	6	6
Madera	913	998	840	906	1,753	1,904	-----	-----	-----
Marin	1,868	1,875	1,681	1,711	3,549	3,586	-----	-----	-----
Mariposa	290	306	250	232	540	538	-----	-----	-----
Mendocino	2,059	2,150	1,886	1,938	3,945	4,088	18	11	29
Merced	1,854	1,906	1,657	1,767	3,511	3,673	-----	-----	-----
Modoc	641	630	622	614	1,263	1,244	5	11	16
Mono	88	75	75	83	163	158	4	4	8
Monterey	1,875	2,017	1,724	1,788	3,599	3,805	2	9	11
Napa	1,303	1,300	1,243	1,258	2,546	2,558	-----	-----	-----
Nevada	1,095	1,089	1,055	1,048	2,150	2,137	-----	-----	-----
Orange	4,259	4,282	4,059	4,100	8,318	8,382	-----	-----	-----
Placer	1,526	1,529	1,297	1,364	2,823	2,893	9	9	18
Plumas	393	404	369	359	762	763	-----	-----	-----
Riverside	3,351	3,486	3,065	3,219	6,416	6,705	-----	-----	-----
Sacramento	5,634	6,044	4,903	5,100	10,537	11,144	13	12	25
San Benito	575	596	571	600	1,146	1,196	-----	-----	-----
San Bernardino	5,298	5,634	4,787	5,059	10,085	10,693	-----	-----	-----
San Diego	6,803	6,737	6,510	6,356	13,313	13,093	11	9	20
San Francisco	29,139	28,910	26,101	25,687	55,240	54,597	-----	-----	-----
San Joaquin	4,519	4,746	4,270	4,925	8,789	9,671	-----	-----	-----
San Luis Obispo	1,703	1,806	1,550	1,668	3,253	3,474	28	30	58
San Mateo	2,487	2,729	2,297	2,438	4,784	5,167	1	3	4
Santa Barbara	2,222	2,330	2,089	2,079	4,311	4,409	-----	-----	-----
Santa Clara	7,008	7,263	6,288	6,348	13,296	13,611	-----	-----	-----
Santa Cruz	2,015	2,049	1,784	1,799	3,799	3,848	-----	-----	-----
Shasta	1,453	1,489	1,454	1,403	2,907	2,892	-----	-----	-----
Sierra	239	235	237	209	476	444	-----	-----	-----
Siskiyou	1,545	1,613	1,471	1,555	3,016	3,168	-----	-----	-----
Solano	1,927	1,965	1,755	1,803	3,682	3,768	-----	-----	-----
Sonoma	4,681	4,739	4,101	4,171	8,782	8,910	-----	-----	-----
Stanislaus	3,256	3,288	3,015	3,120	6,271	6,408	5	5	10
Sutter	693	681	645	640	1,338	1,321	-----	-----	-----
Tehama	1,252	1,230	1,084	1,113	2,336	2,343	-----	-----	-----
Trinity	261	261	221	231	482	492	-----	-----	-----
Tulare	4,408	4,433	4,057	4,106	8,465	8,539	21	25	46
Tuolumne	790	771	730	719	1,520	1,490	-----	-----	-----
Ventura	1,917	2,116	1,768	1,864	3,685	3,980	-----	4	4
Yolo	1,119	1,192	1,017	1,050	2,136	2,242	-----	5	5
Yuba	714	776	650	658	1,364	1,434	7	13	20
Totals	217,524	221,388	198,268	202,174	415,792	423,562	183	228	411

*No data for 1915. Law passed session of 1915.

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Showing Enrollment of Pupils by Grades for the State in the Elementary and in the Postgraduate Elementary Schools.

Elementary schools	1915	1916
Enrolled in first year—		
Boys	46,463	46,269
Girls	40,397	40,548
Enrolled in second year—		
Boys	29,203	29,766
Girls	25,942	26,749
Enrolled in third year—		
Boys	27,657	28,533
Girls	25,389	26,537
Enrolled in fourth year—		
Boys	26,622	27,346
Girls	25,091	24,879
Enrolled in fifth year—		
Boys	24,932	25,638
Girls	22,956	22,992
Enrolled in sixth year—		
Boys	22,193	23,453
Girls	20,526	21,552
Enrolled in seventh year—		
Boys	20,769	20,845
Girls	19,244	19,493
Enrolled in eighth year—		
Boys	19,685	19,538
Girls	18,723	19,424
Totals—		
Boys	217,524	221,388
Girls	198,268	202,174
Grand totals	415,792	423,562
Postgraduate Elementary Schools.		
Enrolled in first year—		
Boys	----------	174
Girls	----------	213
Enrolled in second year—		
Boys	----------	9
Girls	----------	15
Totals—		
Boys	----------	183
Girls	----------	328
Grand total postgraduate pupils	----------	411

NOTE.—The provision for postgraduate grammar school pupils was not completely effective till August, 1915, hence no report previous to 1916 is given. Twenty-seven counties have postgraduate grammar schools. There are 151 schools following this course in all the counties.

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TABLE No. 7.

Showing Number of Graduates from Elementary and from Postgraduate Elementary Schools, Average Daily Attendance in Schools and Average Number of Days School Was Open, by Counties.

Counties	Number graduates from—						Average daily attendance		Average number of days school was open	
	Elementary schools				Postgraduate elementary schools					
	1915		1916		1916					
	Boys	Girls	Boys	Girls	Boys	Girls	1915	1916	1915	1916
Alameda	1,125	1,198	1,335	1,389	-----	-----	32,215	33,016	187	185
Alpine	-----	2	-----	-----	-----	-----	24	25	156	151
Amador	41	43	42	42	-----	-----	1,242	1,320	168	166
Butte	180	192	119	149	-----	-----	3,745	3,698	154	165
Calaveras	58	56	20	35	-----	-----	1,269	1,268	173	167
Colusa	50	34	45	47	-----	-----	999	1,100	160	158
Contra Costa	170	198	134	150	-----	-----	5,753	6,166	175	184
Del Norte	11	12	9	15	-----	-----	423	457	180*	172
El Dorado	21	41	24	36	-----	-----	906	888	156	158
Fresno	506	440	468	558	-----	-----	15,378	15,840	172	161
Glenn	64	53	53	58	3	4	1,374	1,353	176	164
Humboldt	193	184	203	215	-----	-----	4,727	4,883	180	170
Imperial	102	95	95	83	-----	-----	3,139	3,172	163	163
Inyo	24	23	31	49	-----	-----	686	745	166	165
Kern	175	170	176	207	-----	-----	5,410	5,604	169*	157
Kings	70	85	76	101	-----	-----	2,847	3,037	163	168
Lake	30	20	40	43	-----	-----	794	791	155	153
Lassen	18	19	24	33	-----	-----	896	971	160	150
Los Angeles	4,044	4,018	3,827	3,691	-----	2	75,903	77,833	180	167
Madera	34	43	69	55	-----	-----	1,506	1,644	176	168
Marin	138	116	128	125	-----	-----	2,788	2,907	182	182
Mariposa	9	19	11	10	-----	-----	385	405	153	146
Mendocino	100	171	98	176	-----	-----	3,241	3,447	165*	160
Merced	125	121	97	107	-----	-----	2,980	3,096	170	155
Modoc	30	40	28	39	1	5	962	978	150	152
Mono	5	3	1	5	-----	-----	112	128	169	152
Monterey	114	138	133	151	-----	-----	2,979	3,153	183	173
Napa	90	106	103	115	-----	-----	2,177	2,167	175	178
Nevada	77	89	70	73	-----	-----	1,837	1,836	159	160
Orange	258	242	217	260	-----	-----	6,955	7,062	167	167
Placer	95	89	83	82	6	1	2,339	2,442	151	160
Plumas	20	22	7	18	-----	-----	599	601	142	144
Riverside	214	211	200	268	-----	-----	5,437	5,519	174*	174
Sacramento	412	379	425	407	-----	-----	8,384	8,735	170	169
San Benito	37	43	34	59	-----	-----	953	996	177	166
San Bernardino	330	310	306	336	-----	-----	8,370	8,810	176	172
San Diego	434	444	447	466	-----	-----	10,540	10,244	173	173
San Francisco	1,526	1,748	1,621	1,578	-----	-----	41,117	41,916	205	188
San Joaquin	213	260	220	246	-----	-----	7,065	7,697	170	171
San Luis Obispo	123	112	110	133	-----	-----	2,726	2,897	168	163
San Mateo	129	132	129	140	-----	-----	4,054	4,324	198	186
Santa Barbara	132	188	133	124	-----	-----	3,273	3,501	193	186
Santa Clara	442	475	467	409	-----	-----	10,693	11,174	187	175
Santa Cruz	122	156	158	149	-----	-----	3,178	3,274	178	180
Shasta	71	67	68	86	-----	-----	2,272	2,299	152	150
Sierra	9	5	15	15	-----	-----	395	352	167	154
Siskiyou	39	59	51	58	-----	-----	2,530	2,554	161	155
Solano	128	141	124	136	-----	-----	3,102	3,165	186	182
Sonoma	287	299	244	285	-----	-----	6,969	7,230	180	170
Stanislaus	169	205	173	186	-----	-----	5,459	5,649	169	170
Sutter	51	46	67	54	-----	-----	1,126	1,146	174	178
Tehama	62	65	93	124	-----	-----	1,913	1,934	152	155
Trinity	18	14	11	10	-----	-----	349	365	147	150
Tulare	304	298	276	338	-----	2	7,231	7,494	177	163
Tuolumne	40	38	45	63	-----	-----	1,322	1,309	161	164
Ventura	114	132	111	125	-----	-----	2,969	3,146	180	174
Yolo	57	78	100	97	-----	-----	1,813	1,958	179	171
Yuba	40	42	46	60	2	-----	1,170	1,222	154	157
Totals	13,480	14,029	13,440	14,069	12	14	331,000	340,943	†172.8	†166

†Average.

*It will be seen that the schools averaged 172.8 days in 1915 and 166 days in 1916. This is due partly to a more strict counting of time and to a falling off of funds as a

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Showing State Funds Apportioned to Counties and Total Receipts by Districts from All Sources for School Purposes, Including State Apportionment.

Counties	State funds apportioned		Total receipts	
	1915	1916	1915	1916
Alameda	$510,682 90	$527,410 52	$2,604,541 79	$2,826,340 88
Alpine	1,040 11	963 28	3,907 68	3,559 07
Amador	25,345 83	24,686 85	67,186 83	68,881 89
Butte	76,395 91	70,042 45	287,485 39	226,465 90
Calaveras	27,648 76	26,525 15	65,946 29	73,354 08
Colusa	20,505 51	20,669 51	67,617 73	71,027 50
Contra Costa	91,698 34	95,844 88	531,706 58	471,632 10
Del Norte	8,820 42	8,620 69	25,458 87	28,480 91
El Dorado	22,830 40	22,278 47	49,397 19	48,541 37
Fresno	248,370 66	257,154 13	1,180,598 70	1,044,017 95
Glenn	25,955 84	26,703 87	116,895 61	97,405 27
Humboldt	88,813 45	88,356 26	305,130 83	319,768 83
Imperial	45,637 09	52,312 24	347,069 95	430,309 29
Inyo	13,111 93	13,829 95	53,661 19	41,043 66
Kern	95,339 88	98,302 63	461,815 39	485,165 33
Kings	48,336 36	48,540 55	160,091 33	157,011 01
Lake	18,391 78	18,384 08	36,804 17	37,863 82
Lassen	17,688 52	20,257 28	64,223 19	62,293 16
Los Angeles	1,238,509 00	1,246,059 98	8,406,665 59	7,903,919 74
Madera	27,491 78	30,225 08	101,719 71	124,103 05
Marin	48,399 76	47,979 68	201,133 57	168,177 64
Mariposa	10,616 43	10,303 29	25,022 80	25,008 85
Mendocino	69,251 98	68,408 03	185,416 27	191,278 29
Merced	51,249 58	53,260 26	189,239 57	175,358 98
Modoc	21,833 01	21,217 02	65,089 67	64,752 15
Mono	3,512 82	3,959 62	15,244 06	14,524 27
Monterey	59,160 74	60,066 70	150,408 17	176,057 81
Napa	41,070 40	40,521 94	110,594 56	118,222 89
Nevada	36,924 57	36,431 10	82,509 15	83,081 20
Orange	108,032 94	112,893 58	569,597 46	476,624 38
Placer	41,013 06	41,594 37	158,503 20	163,859 26
Plumas	13,949 38	13,879 53	48,873 67	48,607 57
Riverside	90,487 98	94,713 71	465,169 35	393,567 48
Sacramento	141,581 99	142,620 70	882,364 90	989,709 84
San Benito	19,897 81	19,926 84	66,313 55	58,488 45
San Bernardino	138,522 14	143,614 76	665,574 04	647,552 03
San Diego	188,268 18	185,649 08	1,019,819 20	760,062 88
San Francisco	660,540 74	672,909 63	2,261,851 63	2,550,064 62
San Joaquin	117,773 36	122,409 17	820,391 22	625,860 74
San Luis Obispo	55,797 39	55,994 68	177,474 52	227,108 14
San Mateo	67,773 72	68,004 14	275,311 41	339,194 48
Santa Barbara	59,677 80	59,243 52	227,645 27	221,232 70
Santa Clara	184,373 00	178,016 85	562,583 50	633,713 60
Santa Cruz	57,760 50	56,905 77	292,270 79	222,458 68
Shasta	52,888 56	50,678 63	127,384 97	126,047 66
Sierra	8,936 64	8,387 35	23,622 31	21,861 07
Siskiyou	51,248 96	53,664 35	138,432 45	145,891 58
Solano	54,503 41	55,059 54	185,829 64	232,784 51
Sonoma	130,403 82	127,199 74	383,184 42	379,446 07
Stanislaus	90,717 42	92,414 65	316,303 43	374,376 49
Sutter	21,798 84	21,631 34	74,771 66	88,708 55
Tehama	40,831 77	40,415 87	140,586 14	134,384 04
Trinity	9,608 57	9,481 93	23,687 80	25,099 36
Tulare	123,915 23	127,412 66	584,980 85	540,750 17
Tuolumne	25,086 09	25,033 91	66,273 80	57,361 10
Ventura	50,897 61	52,922 19	187,084 68	255,869 31
Yolo	33,477 31	33,466 33	222,433 28	216,275 16
Yuba	23,147 76	23,950 98	60,408 59	63,288 37
Totals	$5,657,545 74	$5,729,411 29	*$26,991,309 58	*$26,557,895 18

*Includes state and county apportionments and special and building funds.

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THE CAPITOL (east side)

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TABLE No. 10.

Showing Average Annual Salary Paid Supervising Principals, Principals and Teachers.

Counties	Average annual salary paid teachers, 1915		*Supervising principal, 1916				†Principal, 1916				Regular teachers, 1916			
	Men	Women	No.	Men	No.	Women	No.	Men	No.	Women	No.	Men	No.	Women
Alameda	$1,704 24	$1,165 32	43	$2,246 37	12	$1,860 00	18	$1,357 22	16	$1,345 00	40	$990 11	924	$1,131 65
Alpine		613 33											3	604 58
Amador	952 91	667 84					6	955 83	1	600 00	2	442 50	52	652 70
Butte	1,098 67	556 76	2	2,075 00			6	1,005 00	16	873 43	7	862 14	132	713 70
Calaveras	708 92	637 70									13	729 99	49	656 76
Colusa	949 35	685 03					8	1,077 65			5	656 00	42	706 80
Contra Costa	1,426 92	850 04	3	1,860 00	1	1,500 00	7	1,422 85	7	1,370 71	3	966 66	182	896 86
Del Norte	646 00	694 00							1	1,150 00	5	714 50	17	633 45
El Dorado	633 90	564 82					1	900 00	1	680 00	5	657 50	51	562 66
Fresno	1,173 55	822 72	6	1,875 00	2	1,293 75	33	1,142 08	52	762 81	13	1,058 07	426	821 52
Glenn	913 00	691 18					6	1,012 50	2	675 00	7	742 14	48	696 62
Humboldt	924 75	770 56	5	1,675 00			10	1,096 00	20	944 63	7	705 64	157	747 35
Imperial	1,489 93	857 98					4	1,060 00	21	842 25	4	812 85	118	744 04
Inyo	1,125 00	720 05					1	1,200 00			3	766 00	30	707 00
Kern	1,240 60	824 08	4	1,880 00	3	1,350 00	4	1,245 00	27	989 72	10	695 00	190	788 51
Kings	1,060 83	770 99	2	2,000 00			7	910 00	8	865 62	6	838 00	76	750 67
Lake	732 50	473 33					3	895 00	2	640 00	3	520 00	37	577 21
Lassen	777 11	650 32	1	1,125 00			1	1,125 00			13	772 62	39	639 92
Los Angeles	1,478 98	1,100 31	53	2,101 98	55	1,939 09	79	1,406 37	132	1,167 58	59	1,059 76	2,224	1,002 00
Madera	922 94	670 12	1	1,800 00			2	1,080 00	8	840 42	1	810 00	64	737 32
Marin	2,217 33	888 21	3	2,012 00			3	1,433 33	17	1,155 26			89	840 90
Mariposa	510 00	619 49							2	659 62	1	637 50	28	584 50
Mendocino	751 42	623 81	2	1,350 00			6	915 00	3	780 00	10	591 25	142	616 41
Merced	973 38	730 00	2	1,800 00			10	854 75	13	800 38	2	725 00	101	733 72
Modoc	712 11	517 65					4	958 75	2	877 50	8	654 28	39	650 61
Mono	888 33	725 71									2	1,075 00	10	680 70
Monterey	1,040 00	764 00					6	1,288 00	11	955 23	4	688 75	122	727 43
Napa	1,458 00	730 00	1	1,800 00							4	1,220 50	81	707 73
Nevada	1,380 20	733 14					1	850 00	1	1,092 50	3	1,033 00	71	736 00
Orange	1,101 16	745 52	1	1,800 00			18	1,265 55	33	934 50	4	1,097 50	197	759 82
Placer	1,128 77	621 75	1	1,350 00			6	1,142 50	4	795 00	4	896 25	82	705 17
Plumas	626 66	656 73							3	738 00	3	590 00	28	685 00
Riverside	994 00	771 00	2	2,475 00	1	1,380 00	13	1,161 00	22	869 00	6	645 00	186	743 00
Sacramento	1,092 35	1,037 37	3	1,447 33	13	1,667 85	5	1,020 75	18	947 64	7	565 71	318	1,037 40
San Benito	996 25	670 00					2	1,390 00	2	698 50	2	705 00	39	660 00
San Bernardino	1,461 00	811 43	4	1,700 02	3	1,110 00	13	1,185 00	40	988 00	3	693 00	286	789 00

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San Diego	1,136 62	866 89	10	1,798 80	1	2,004 00	10	1,264 60	28	946 29	7	659 43	360	574 45
San Francisco	1,309 00	1,140 00	11	1,925 00	63	2,078 41	-----	----------	14	1,486 36	24	939 20	1,119	1,052 13
San Joaquin	1,207 24	859 70	1	1,750 00	-----	----------	21	1,246 00	21	872 00	5	751 00	212	883 00
San Luis Obispo	911 07	700 85	-----	----------	-----	----------	8	1,193 75	6	776 66	6	764 58	124	570 10
San Mateo	1,565 00	949 51	5	2,232 00	-----	----------	3	1,260 00	13	1,112 96	2	1,050 00	118	905 01
Santa Barbara	1,064 74	855 60	-----	----------	-----	----------	6	1,541 66	5	976 50	5	1,056 00	121	796 90
Santa Clara	1,497 99	843 39	9	1,734 00	2	1,800 00	9	1,210 00	34	862 94	5	727 09	321	854 41
Santa Cruz	1,390 07	754 77	1	2,500 00	-----	----------	4	1,200 00	11	945 00	1	850 00	119	750 75
Shasta	700 00	615 38	-----	----------	-----	----------	2	1,237 50	4	912 50	9	612 22	111	627 55
Sierra	993 75	685 29	-----	----------	-----	----------	2	800 00	1	900 00	2	986 00	16	529 00
Siskiyou	796 14	645 35	-----	----------	-----	----------	10	941 00	4	953 00	10	607 00	102	623 00
Solano	1,360 00	859 60	-----	----------	-----	----------	6	1,460 00	9	1,051 48	2	930 00	105	887 15
Sonoma	929 41	777 96	4	1,594 85	-----	----------	12	920 00	24	916 01	7	914 71	234	739 99
Stanislaus	1,121 95	737 29	2	1,200 00	-----	----------	9	1,157 77	22	856 25	7	942 14	152	761 08
Sutter	887 46	713 90	-----	----------	-----	----------	6	931 66	3	720 00	1	900 00	44	713 69
Tehama	729 13	665 22	1	1,500 00	-----	----------	5	900 00	7	727 00	8	684 72	81	649 14
Trinity	810 00	604 68	-----	----------	-----	----------	1	925 00	-----	----------	1	600 00	24	607 00
Tulare	1,066 20	785 80	3	2,171 66	1	1,600 00	16	1,110 94	25	895 80	6	894 16	231	770 03
Tuolumne	680 96	692 20	-----	----------	-----	----------	4	954 68	3	1,107 00	3	810 75	44	696 50
Ventura	1,357 78	751 83	-----	----------	-----	----------	5	1,540 00	10	857 75	-----	----------	105	740 92
Yolo	1,272 33	758 39	1	1,800 00	-----	----------	5	1,013 00	8	936 91	3	660 00	62	761 22
Yuba	860 00	684 33	1	1,800 00	-----	----------	2	900 00	-----	----------	4	672 50	50	699 00
Totals	‡$1,050 65	‡$746 21	190	‡$1,982 50	157	‡$1,921 43	429	‡$1,223 99	737	‡$970 05	387	‡$841 93	10,535	‡$668 95

*Supervising principal is a principal who gives all his time to supervision.
†A principal is one who teaches part or all the time, but has charge of one or more schools.
‡Average.

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TABLE No. 11.

Showing Average Annual Salary Paid Special Teachers, 1916.

Counties	Supervisors of subjects (special)				Teachers of subjects (special)			
	No.	Men	No.	Women	No.	Men	No.	Women
Alameda	13	$1,446 15	26	$1,202 11	22	$1,303 63	21	$1,346 91
Alpine								
Amador							2	641 25
Butte	1	1,100 00	3	900 00				
Calaveras								
Colusa							2	332 50
Contra Costa			2	362 50	2	780 00	4	877 50
Del Norte								
El Dorado								
Fresno	4	791 66	2	1,660 00			3	953 46
Glenn							1	765 00
Humboldt			1	1,200 00	2	750 00	7	821 43
Imperial			1	618 87	2	1,100 00	7	1,129 43
Inyo								
Kern	2	1,880 00	5	1,296 00				
Kings	1	1,214 40	1	1,305 00			4	716 25
Lake							1	315 00
Lassen								
Los Angeles	25	1,055 25	58	1,615 03	55	1,032 38	304	985 89
Madera					2	975 00	1	900 00
Marin								
Mariposa								
Mendocino								
Merced								
Modoc								
Mono								
Monterey			1	1,250 00				
Napa								
Nevada								
Orange					5	793 00	14	697 30
Placer					2	270 00	2	562 00
Plumas								
Riverside					6	1,123 00	8	1,140 00
Sacramento	2	1,800 00	4	1,755 00	7	1,155 08	11	186 86
San Benito							2	920 00
San Bernardino					8	1,030 00	21	804 00
San Diego	8	1,289 00	11	1,281 09	1	851 36	8	799 91
San Francisco	2	2,460 00	8	1,507 50	25	1,096 80	37	762 12
San Joaquin	1	1,620 00	2	1,620 00	6	1,210 00	6	1,254 00
San Luis Obispo							1	450 00
San Mateo					1	1,450 00	6	885 00
Santa Barbara					6	716 66	15	539 20
Santa Clara	1	2,281 65	1	1,200 00	3	660 00	3	730 00
Santa Cruz			4	950 00	3	943 00	4	1,025 00
Shasta								
Sierra								
Siskiyou					1	60 00		
Solano								
Sonoma					2	2,400 00	3	1,850 00
Stanislaus					4	381 25	11	655 45
Sutter								
Tehama			1	720 00	1	360 00	1	810 00
Trinity								
Tulare					4	1,068 75	5	917 00
Tuolumne								
Ventura							4	681 25
Yolo							2	357 00
Yuba							1	620 00
Totals	60	†$1,537 91	131	†$1,409 60	170	†$1,040 20	522	*†$919 77

†Average.
*Special teachers often teach but one subject, hence low salary in some instances.

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Showing Bonded Indebtedness for Elementary Schools, Average Interest Rate on Outstanding Bonds and Rate of Special Tax for Maintenance and for Buildings.

Counties	Total bonded indebtedness		Average rate of interest on outstanding bonds		Average rate of special tax			
					Maintenance		Buildings	
	1915	1916	1915	1916	1915	1916	1915	1916
Alameda	$1,579,325	$4,041,949	$0.04	$0.05	$0.24	$0.22	$0.13	
Alpine								
Amador	500		.06		.157	.14	.40	$0.70
Butte	193,840	181,680	.055	.055	.375	.226		
Calaveras								.01
Colusa	25,000	23,000	.055	.049	.27	.25	.13	
Contra Costa	489,850	514,600	.05	.05	.13	.24	.46	.16
Del Norte					.06	.131		
El Dorado					.125	.20	.57	
Fresno	993,023	968,136	.055	.0586	.43	.194	.04	.236
Glenn	95,000	93,500	.055	.057	.157	.124		.15
Humboldt	52,000	45,500	.048	.075	.30	.2279	.637	.6313
Imperial	308,250	419,600	.06	.06	.268	.198	.17	.26
Inyo	57,850	28,550	.06	.06	.12	.285	.10	
Kern	551,105	620,050	.06	.06	.22	.22		.61
Kings	146,570	129,180	.06+	.061	.256	.187	.42	
Lake	1,250	725	.07	.07		.19	.26	.35
Lassen	10,190	11,534	.066	.066	.30	.06		.40
Los Angeles	7,377,087	8,454,987	.051	.05	.177	.164	.115	
Madera	106,425	118,725	.061	.06	.112	.083		.225
Marin	125,800	111,000	.05	.053	.20	.099		.015
Mariposa	5,300		.066	.066			.35	.35
Mendocino	26,000	13,080	.05+	.06	.257	.100	.181	.177
Merced	130,050	118,875	.06	.06	.19	.18	.26	
Modoc	39,720	35,890	.063	.061		.10	.49	.24
Mono								
Monterey	32,500	33,300	.061	.06	.15	.12		.06
Napa	3,200	29,300	.052		.096	.47	.135	
Nevada					.50	.15		
Orange	441,375	544,500	.05	.05	.211	.175	.40	.221
Placer	28,150	85,200	.05	.06	.31	.16	.36	.40
Plumas	25,000		.057		.30		.305	.30
Riverside	302,750	412,150	.057	.0578	.23	.21	.38	.26
Sacramento	690,380	940,090	.052	.051	.21	.18		
San Benito	23,450	21,850	.055		.18	.103		
San Bernardino	592,500	629,500	.05	.05	.195	.186	.316	.475
San Diego	895,550	860,200	.056	.056	.24	.26	.41	.13
San Francisco	5,220,000	5,228,600	.0425	.0406				
San Joaquin	722,985	772,960	.06	.06	.201	.16	.148	.1164
San Luis Obispo	15,700	87,000	.063	.061	.165	.132		
San Mateo	291,500	380,750	.05	.05	.114	.12	.11	
Santa Barbara	128,150	125,425	.058	.054	.135	.1766	.44	
Santa Clara	561,550	622,500	.053	.05	.19	.16		.21
Santa Cruz	135,710	113,870	.053	.05	.20	.162	.197	
Shasta	10,110	7,150	.056		.252	.40	.70	
Sierra	5,250				.15	.15		
Siskiyou	30,200	30,500	.06	.061	.267	.199		.365
Solano	58,500	99,000	.02	.054	.13	.16		
Sonoma	198,763	197,271	.055	.058	.135	.164	.237	
Stanislaus	523,482	522,807	.05	.0544	.24	.153	.31	
Sutter	14,000	17,950	.06	.06	.19	.113	.14	
Tehama	13,900	35,200	.05	.06	.525	.760	.225	.13
Trinity						.25		.70
Tulare	547,290	551,662	.059	.06	.204	.2006	.88	.30
Tuolumne	49,500	45,750	.057			.17		
Ventura	72,500	135,800	.052	.0525	.12	.16	.242	.60
Yolo	116,750	111,500	.055	.05	.151	.155	.60	.60
Yuba	28,200	28,200	.052	.051	.166	.15		
Totals	$24,093,010	$28,600,496	*$0.054	*$0.0567	*$0.214	*$0.188	*$0.321	*$0.321

*Average.

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HIGH SCHOOLS.

SECONDARY (HIGH) SCHOOLS.

TABLE No. 13. Number of Teachers—Regular and Special—Men and Women for 1915 and 1916.

TABLE No. 14. Grade of Certificate Held by Teachers.

TABLE No. 15. Number of Pupils Enrolled—Boys and Girls and Postgraduate Pupils Enrolled—Boys and Girls for 1915 and 1916.

TABLE No. 16. Number of Pupils Enrolled by Grades—Boys and Girls, for 1915 and 1916.

TABLE No. 17. Number of Graduates—Boys and Girls—1915 and 1916 and Average Daily Attendance for Both Years.

TABLE No. 18. Total State Aid Apportioned to High Schools by Counties; Total Receipts from All Sources and Total Expenditure by High Schools—1915 and 1916.

TABLE No. 19. Total Valuation of All High School Property by Counties; Average District Tax Rate for Maintenance and for Buildings—1915 and 1916—and Average County Tax Rate for High Schools.

TABLE No. 20. Total Bonded Debt Outstanding and Rate of Interest (Average by County) Paid on Bonds.

TABLE No. 21. Average Salary Paid Teachers—Men and Women for 1915, and Average Annual Salary Paid—Principals—Men and Women; Regular Teachers—Men and Women; Special Teachers—Men and Women for 1916. The Number of Each Is Given.

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TABLE No. 13.

Statistics of Secondary (High) Schools, Showing Number of Schools and Number of Teachers, by Sex and by County.

Counties	Number of teachers, 1915		Regular high school, 1916				Total number teachers, 1916
			Regular teachers		Special teachers		
	Men	Women	Men	Women	Men	Women	
Alameda	94	175	112	188	3	8	311
Alpine							
Amador	5	7	4	5	2	2	13
Butte	16	20	11	20	3	3	37
Calaveras	3	5	4	4			8
Colusa	10	16	9	16			25
Contra Costa	14	35	9	33	3	6	51
Del Norte	1	5	1	3	1	1	6
El Dorado	3	3	3	3			6
Fresno	58	66	46	54	19	12	131
Glenn	7	5	5	5	2	2	14
Humboldt	14	18	10	21	3	1	35
Imperial	21	29	20	20	5	7	52
Inyo	4	6	4	5		2	11
Kern	22	15	19	20	7	6	52
Kings	12	12	8	11	4	4	27
Lake	4	4	4	4			8
Lassen	3	3	3	3			6
Los Angeles	423	660	304	564	220	355	1,443
Madera	4	5	3	5	2	1	11
Marin	11	16	5	14	5	3	27
Mariposa	1		1	1			2
Mendocino	12	19	12	19	2		33
Merced	12	22	9	16	4	9	38
Modoc	6	7	4	6	2	2	14
Mono							
Monterey	13	23	9	19	5	4	37
Napa	8	14	6	11	2	5	24
Nevada	5	10	6	12			18
Orange	47	61	36	38	15	23	112
Placer	10	15	10	15	1	1	27
Plumas	2	2	1	3			4
Riverside	43	48	32	34	10	13	89
Sacramento	36	37	42	47			89
San Benito	5	3	3	3	1		7
San Bernardino	47	62	30	33	22	28	113
San Diego	60	84	60	71	26	25	182
San Francisco	86	81	62	63	38	44	207
San Joaquin	22	26	18	22	7	5	52
San Luis Obispo	10	10	9	8	2	4	23
San Mateo	10	17	6	14	5	5	30
Santa Barbara	23	22	15	16	10	6	47
Santa Clara	43	74	24	57	19	26	126
Santa Cruz	13	24	7	20	4	5	36
Shasta	10	9	7	6	4	2	19
Sierra	1	2	1	2			3
Siskiyou	5	11	6	9		3	18
Solano	13	25	11	25	3	5	44
Sonoma	15	37	15	34	4	5	58
Stanislaus	25	27	22	28	6	11	67
Sutter	3	4	3	4			7
Tehama	7	10	6	8	3	3	20
Trinity	2	2	1	2	1		4
Tulare	34	47	28	37	10	11	86
Tuolumne	5	8	3	7	3		13
Ventura	17	19	11	15	7	7	40
Yolo	8	13	6	14	1		21
Yuba	6	9	6	4	2	3	15
Totals	*1,394	*1,989	1,112	1,721	498	668	3,999

*Previous to 1916 teachers were not segregated, except as to men and women. In reports for 1916 teachers are segregated, as given above.

NOTE.—Reports show no teachers in postgraduate schools. Evidently regular high school teachers are used, though there are 1,118 pupils taking this work.

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TABLE No. 14.

Statistics of Secondary (High) Schools, Showing Certificates Held by Teachers.

Counties	Certificates, 1915		Certificates, 1916	
	Regular high	Special	Regular high	Special
Alameda	192	77	219	92
Alpine				
Amador	11	1	9	4
Butte	30	6	31	6
Calaveras	7	1	7	1
Colusa	26		25	
Contra Costa	35	14	42	9
Del Norte	4	2	4	2
El Dorado	5	1	5	1
Fresno	98	26	101	30
Glenn	11	1	10	4
Humboldt	29	3	31	4
Imperial	33	17	36	16
Inyo	8	2	9	2
Kern	24	13	39	13
Kings	17	7	19	8
Lake	6	2	8	
Lassen	5	1	6	
Los Angeles	689	394	868	575
Madera	6	3	8	3
Marin	17	10	16	11
Mariposa	1		2	
Mendocino	24	7	29	4
Merced	28	6	25	13
Modoc	9	4	10	4
Mono				
Monterey	24	12	28	9
Napa	21	1	17	7
Nevada	13	2	16	2
Orange	74	34	74	38
Placer	24	1	23	4
Plumas	4		4	
Riverside	74	17	66	23
Sacramento	47	26	58	31
San Benito	7	1	6	1
San Bernardino	57	52	64	49
San Diego	101	43	131	51
San Francisco	110	57	126	81
San Joaquin	33	15	49	3
San Luis Obispo	17	3	17	6
San Mateo	16	11	21	9
Santa Barbara	30	15	31	16
Santa Clara	80	37	81	45
Santa Cruz	28	9	27	9
Shasta	15	4	13	6
Sierra	3		3	
Siskiyou	14	2	15	3
Solano	31	7	36	8
Sonoma	46	6	49	9
Stanislaus	43	9	51	16
Sutter	4	3	5	2
Tehama	16	1	14	6
Trinity	3	1	3	1
Tulare	67	14	66	20
Tuolumne	10	3	10	3
Ventura	25	11	26	14
Yolo	16	5	20	1
Yuba	9	6	10	5
Totals	2,377	1,006	2,709	1,290

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TABLE No. 15.

Statistics of Secondary (High) Schools, Showing Enrollment of Pupils in Regular High Schools and Postgraduate High Schools

Counties	Regular high schools				Grand totals		Postgraduate high schools, 1916				Grand total, 1916
	1915		1916				First year		Second year		
	Boys	Girls	Boys	Girls	1915	1916	Boys	Girls	Boys	Girls	
Alameda	2,848	3,265	3,924	4,191	6,113	8,115					
Alpine											
Amador	75	123	79	119	198	198					
Butte	332	462	379	527	794	906					
Calaveras	52	73	61	75	125	136					
Colusa	106	134	104	125	240	229					
Contra Costa	312	408	359	469	720	828		2			2
Del Norte	31	46	26	43	77	69					
El Dorado	52	70	33	74	122	107					
Fresno	1,060	1,197	1,185	1,273	2,257	2,458	49	38	14	6	107
Glenn	113	122	127	128	235	255					
Humboldt	322	419	343	447	741	790					
Imperial	323	356	445	405	679	850	1	4	1	2	8
Inyo	63	90	80	100	153	180					
Kern	245	277	347	385	522	732	14	5	3	1	23
Kings	141	206	178	252	347	430					
Lake	65	88	79	80	153	159					
Lassen	17	32	24	50	49	74					
Los Angeles	15,042	15,761	18,889	19,328	30,803	38,217	252	390	47	48	727
Madera	51	69	58	108	120	166					
Marin	199	266	266	283	465	549					
Mariposa	9	15	8	18	24	26					
Mendocino	202	304	237	324	506	561					
Merced	173	233	205	235	406	440		1			1
Modoc	86	73	85	88	159	173					
Mono											
Monterey	240	276	235	321	516	556					
Napa	201	253	213	257	454	470					
Nevada	157	198	159	209	355	368					
Orange	775	976	919	1,103	1,751	2,022	23	37	10	7	77
Placer	169	192	167	209	361	376	8	8	5	2	23
Plumas	19	31	18	25	50	43					
Riverside	630	715	738	771	1,345	1,509					
Sacramento	1,185	1,233	1,489	2,106	2,418	3,595					
San Benito	59	106	55	110	165	165					
San Bernardino	854	987	965	1,105	1,841	2,070					
San Diego	1,232	1,359	2,230	2,413	2,591	4,643	29	44	4	7	84
San Francisco	3,308	2,818	4,829	3,717	6,126	8,546					
San Joaquin	422	563	480	653	985	1,133					
San Luis Obispo	130	176	153	201	306	354					
San Mateo	281	284	300	320	565	620					
Santa Barbara	384	461	367	492	845	859	15	15	6	11	47
Santa Clara	1,060	1,346	1,549	1,731	2,406	3,280					
Santa Cruz	320	397	331	470	717	801					
Shasta	152	189	162	183	341	345					
Sierra	14	9	15	11	23	26					
Siskiyou	91	135	101	138	226	239	1	15	1		17
Solano	277	377	292	412	654	704					
Sonoma	478	665	511	654	1,143	1,165					
Stanislaus	376	518	423	591	894	1,014					
Sutter	62	40	64	39	102	103					
Tehama	138	211	155	240	349	395					
Trinity	16	18	16	23	34	39					
Tulare	688	809	790	889	1,497	1,679	1	1			2
Tuolumne	75	132	81	124	207	205					
Ventura	259	312	325	369	571	694					
Yolo	161	232	165	237	393	402					
Yuba	86	104	168	169	190	337					
Totals	36,218	40,211	45,966	49,419	76,429	95,405	393	550	91	84	1,118

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TABLE No. 16.

Statistics of Secondary (High) Schools, Showing Enrollment of Students by Grades and by Sex for the State in the Regular High Schools and in the Postgraduate High Schools.

Enrolled in regular high schools	1915	1916
First year—		
Boys	19,314	23,797
Girls	19,097	23,009
Second year—		
Boys	7,823	9,930
Girls	9,257	11,159
Third year—		
Boys	5,009	6,683
Girls	6,109	8,342
Fourth year—		
Boys	4,072	5,576
Girls	5,748	6,909
Totals—		
Boys	36,218	45,986
Girls	40,211	49,419
Grand totals	76,429	95,405
***Enrolled in Postgraduate High Schools.**		
First year—		
Boys	----------	393
Girls	----------	550
Second year—		
Boys	----------	91
Girls	----------	84
Total—		
Boys	----------	484
Girls	----------	634
Grand total	----------	1,118

*This course is often popularly called the "Junior College." The law provides for postgraduate high school work.

NOTE —The table above shows no postgraduate pupils before the year 1916. There were some, but there was no note made of this as they were enrolled in the regular high schools. Many students now return to the high school for work in studies that they could not take in their regular course. They are not classed as postgraduate pupils for the reason that they are not pursuing the regular postgraduate work.

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Statistics of Secondary (High) Schools, Showing Total State Apportionment, Total Receipts and Total Expenditures by Counties.

Counties	Total state apportionment, 1915	Total state apportionment, 1916	Total receipts, including state apportionment		Total expenditures	
			1915	1916	1915	1916
Alameda	$55,151 98	$63,624 90	$949,005 68	$719,731 61	$912,481 85	$675,616 95
Alpine						
Amador	4,220 91	4,811 76	36,449 04	37,665 08	27,236 09	30,227 81
Butte	9,813 77	10,514 91	68,909 66	83,332 06	54,912 77	61,199 95
Calaveras	2,963 83	3,204 51	21,046 69	22,854 20	14,100 03	14,355 78
Colusa	6,935 05	7,386 90	60,884 05	60,997 68	46,635 08	45,094 92
Contra Costa	12,026 75	13,358 64	131,974 43	158,996 52	106,344 25	111,510 89
Del Norte	1,666 73	1,647 21	15,016 56	16,944 84	9,317 69	10,136 92
El Dorado	1,976 42	2,076 78	14,233 70	16,704 19	10,426 64	10,818 33
Fresno	29,311 44	32,522 61	431,882 00	483,888 41	324,318 80	327,824 83
Glenn	3,253 54	3,704 01	120,401 15	40,746 14	113,765 84	28,365 46
Humboldt	9,743 84	10,255 17	204,099 53	117,133 75	176,219 08	84,893 25
Imperial	9,152 83	10,568 72	257,636 56	310,937 67	178,220 91	177,610 83
Inyo	3,023 77	3,374 34	30,810 19	17,887 79	25,460 07	17,910 43
Kern	6,250 54	6,381 33	160,554 64	275,485 17	133,222 71	142,589 05
Kings	4,559 63	5,910 66	72,722 30	78,432 36	64,279 17	63,738 05
Lake	1,906 49	3,284 43	14,736 83	45,798 51	10,671 81	12,976 63
Lassen	1,357 04	1,467 39	16,107 87	17,002 55	11,212 43	11,988 56
Los Angeles	186,152 80	206,758 53	4,853,860 54	5,731,542 81	3,411,348 58	4,115,073 10
Madera	1,836 56	2,116 74	21,576 31	32,827 85	16,231 21	28,207 14
Marin	6,518 67	6,759 81	52,995 66	60,018 93	48,242 11	50,390 15
Mariposa		1,187 67	3,378 06	6,737 76	2,026 94	4,190 67
Mendocino	10,228 55	11,360 64	90,011 94	92,564 44	52,511 80	54,148 31
Merced	8,871 51	9,508 64	125,766 88	101,539 08	106,151 82	76,222 04
Modoc	2,983 81	3,214 50	26,731 85	24,077 49	21,578 52	21,469 17
Mono						
Monterey	8,968 08	9,354 93	123,075 42	80,043 54	117,059 82	68,382 49
Napa	6,348 84	6,759 81	50,787 34	68,096 21	36,533 32	47,989 96
Nevada	5,689 50	6,160 41	23,528 25	30,315 81	21,963 90	26,742 04
Orange	18,813 16	20,533 74	270,162 13	308,640 71	242,655 77	280,702 30
Placer	5,469 72	6,140 43	96,192 07	62,871 02	52,326 58	46,267 63
Plumas	1,217 18	1,357 50	9,525 28	12,556 39	8,883 13	9,731 05
Riverside	19,724 24	22,804 62	235,179 96	247,000 81	176,324 41	169,868 40
Sacramento	17,564 41	18,775 50	206,668 91	215,226 21	158,267 04	204,064 80
San Benito	2,376 02	2,476 88	15,040 31	16,718 84	13,581 87	14,112 79
San Bernardino	19,770 60	21,681 45	589,831 74	476,338 06	342,982 99	354,041 31
San Diego	26,868 69	29,839 86	351,925 94	346,630 80	313,921 54	294,163 83
San Francisco	43,015 73	45,546 42	522,265 02	515,119 86	522,265 02	488,435 11
San Joaquin	11,831 75	12,612 81	191,467 50	138,494 98	167,238 12	129,180 14
San Luis Obispo	5,269 92	5,561 01	45,577 54	46,886 50	35,795 14	37,841 50
San Mateo	6,856 73	8,815 47	90,645 49	104,696 98	57,335 87	70,786 76
Santa Barbara	9,424 16	11,233 05	105,137 29	118,985 51	91,908 80	92,389 80
Santa Clara	26,270 89	27,992 85	228,894 30	317,299 93	210,766 56	236,467 91
Santa Cruz	8,756 43	9,067 48	235,478 65	138,352 57	173,358 01	132,166 02
Shasta	4,900 29	5,680 89	45,581 93	48,559 24	32,455 37	33,107 83
Sierra	1,137 26	1,187 67	6,370 69	5,578 81	5,040 02	5,035 76
Siskiyou	4,650 54	5,001 57	51,645 30	62,396 30	45,503 77	52,124 28
Solano	10,559 82	11,171 97	269,541 80	178,074 43	185,766 60	156,222 42
Sonoma	14,266 11	15,647 49	232,280 50	238,625 56	119,931 23	195,019 20
Stanislaus	14,252 92	15,974 88	213,060 43	180,878 81	182,743 21	118,537 96
Sutter	1,826 57	1,956 90	25,250 66	18,597 19	23,711 61	18,776 88
Tehama	4,792 00	5,082 63	36,896 58	148,219 65	29,895 81	50,561 78
Trinity	1,277 12	1,277 58	7,600 73	8,111 68	5,934 54	5,826 29
Tulare	18,968 21	21,508 11	184,420 31	239,109 56	156,799 86	188,001 08
Tuolumne	3,513 28	3,833 88	29,924 91	31,943 72	23,773 60	25,045 35
Ventura	9,082 90	10,024 26	177,678 82	120,021 74	128,574 45	88,635 50
Yolo	6,318 87	6,679 89	85,789 11	107,087 49	59,445 21	77,905 01
Yuba	3,513 28	3,674 04	26,237 27	27,935 93	24,207 61	24,013 05
Totals	$724,236 63	$800,516 28	$12,516,494 25	$13,203,206 78	$9,643,866 93	$9,913,739 95

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TABLE No. 13.

Statistics of Secondary (High) Schools, Showing Total Valuation of All Property, Average Rate of High School Tax and Rate of County Tax for High School Purposes.

Counties	Total valuation of all property		District tax rate				County tax rate, 1916
			Maintenance		Building		
	1915	1916	1915	1916	1915	1916	
Alameda	$2,261,443	$2,185,493	$0.285	$0.13	$0.04	----------	$0.14
Alpine	----------	----------	----------	----------	----------	----------	----------
Amador	70,615	77,775	.40	.15	.15	.10	.20
Butte	113,400	119,600	.337	.11	----------	----------	.225
Calaveras	13,350	14,450	.275	.15	----------	----------	.11
Colusa	102,150	103,800	.24*	.22	----------	----------	.10
Contra Costa	242,662	256,675	.29	.22	----------	.03	.10
Del Norte	17,350	17,750	.18	----------	----------	----------	.19
El Dorado	30,000	30,000	.18	.18	----------	----------	.114
Fresno	588,705	681,222	.45	.344	.20	----------	.15
Glenn	153,900	157,700	.175	.14	.15	----------	.08
Humboldt	195,900	211,050	.4211	.07085	.2723	----------	.12
Imperial	440,183	498,427	.606	.332	----------	----------	.15
Inyo	36,665	36,941	.345	.13	----------	----------	.10
Kern	298,700	397,678	.297	.29	.06	.03	----------
Kings	145,200	161,550	.48	.303	.60	----------	.13
Lake	3,127	6,978	.225	.21	----------	----------	.165
Lassen	38,000	38,500	.15	.16	----------	----------	.05
Los Angeles	7,373,254	9,099,551	.373	.37	.077	----------	.145
Madera	62,500	73,533	.15	.14	----------	.07	.06
Marin	103,300	106,450	.28	.226	----------	----------	.11
Mariposa	486	1,347	.10	----------	----------	----------	.13
Mendocino	102,977	97,609	.31	.1064	----------	.0516	.17
Merced	212,444	215,775	.333	.241	----------	----------	.10
Modoc	71,250	71,480	.325	.106	----------	----------	.10
Mono	----------	----------	----------	----------	----------	----------	----------
Monterey	199,450	204,700	.40	.184	----------	----------	.10
Napa	104,400	106,000	.34	.27	----------	----------	.14
Nevada	47,800	46,050	.33	.10	.20	----------	.30
Orange	891,150	912,800	.754	.50	.232	.15	.20
Placer	102,150	146,775	.46	.29	.07	----------	.20
Plumas	44,900	49,550	.12	----------	----------	----------	----------
Riverside	590,795	565,972	.58	.379	----------	.35	.29
Sacramento	576,900	618,680	.295	.065	----------	----------	.104
San Benito	62,500	54,000	.15	----------	----------	----------	.15
San Bernardino	871,845	923,035	.45	.32	----------	----------	.224
San Diego	756,160	790,800	.60	.515	----------	.153	.19
San Francisco	3,003,894	3,135,786	----------	----------	----------	----------	.047
San Joaquin	580,786	544,103	.265	.129	.16	----------	.09
San Luis Obispo	90,340	91,300	.65	.436	----------	----------	.09
San Mateo	383,585	396,250	.2675	.155	.086	----------	.07
Santa Barbara	128,500	229,730	.43	.268	----------	----------	.14
Santa Clara	511,750	528,772	.419	.20	.103	.10	.16
Santa Cruz	239,511	251,650	.39	.41	.15	----------	.195
Shasta	78,895	78,650	.25	.10	----------	----------	.14
Sierra	2,750	750	----------	.12	.20	----------	.216
Siskiyou	72,921	77,500	.246	.388	.55	.121	.07
Solano	219,875	340,950	.36	.233	.12	----------	.14
Sonoma	225,825	345,075	.29	.2975	.12	----------	.159
Stanislaus	283,188	292,418	.43	.47	.59	----------	.20
Sutter	32,000	38,000	.33	.33	.04	----------	.10
Tehama	92,000	92,510	.40	.20	----------	----------	.15
Trinity	10,248	10,395	.15	----------	----------	----------	.15
Tulare	286,209	351,185	.63	.292	----------	----------	.20
Tuolumne	100,300	100,050	.35	.35	.01	----------	.25
Ventura	307,975	320,525	.426	.174	.1375	----------	.11
Yolo	146,414	204,325	.345	.21	.20	----------	.102
Yuba	64,050	79,050	.55	.525	----------	----------	.05
Totals	$23,786,827	$26,588,670	†$0.345	†$0.235	†$0.168	†$0.1125	†$0.142

*County tax rate for high schools was not used except in county high schools previous to 1916, as the law went into effect August 12, 1915.

†Average.

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TABLE No. 20.

Statistics of Secondary Schools, Showing Bonded Debt Against High School Districts and Average Rate of Interest Paid on Bonds Issued.

Counties	Bonded debt		Average rate of interest paid on bonds issued	
	1915	1916	1915	1916
Alameda	$972,393	$881,989	$0.0475	$0.045
Alpine				
Amador	24,000	24,000	.06	.05
Butte		4,000		.05
Calaveras				
Colusa	53,000	52,500	.05	.05
Contra Costa	91,500	86,500	.046	.05
Del Norte				
El Dorado				
Fresno	143,000	180,500	.0525	.053
Glenn		90,000	.055	.055
Humboldt	152,500	176,000	.05	.05
Imperial	319,000	436,000	.057	.06
Inyo	11,500	11,500	.07	.07
Kern	50,000	170,000	.06	.06
Kings	45,000	45,000	.05	.05
Lake		25,000		.05
Lassen				
Los Angeles	5,219,000	5,980,300	.052	.05
Madera				
Marin	44,000	44,000	.05	.05
Mariposa				
Mendocino	11,500		.048	
Merced	35,000	34,000	.055	.055
Modoc				
Mono				
Monterey	27,000	25,000	.05	.05
Napa	49,500	47,500	.05	.05
Nevada	27,750	27,000	.055	.05
Orange	587,500	567,750	.057	.05
Placer	117,500	55,000	.055	
Plumas				
Riverside	462,000	406,000	.05	.048
Sacramento	182,000	180,000	.051	.0516
San Benito	21,000	18,000	.045	.045
San Bernardino	572,500	592,500	.05	.05
San Diego	383,000	371,250	.053	.053
San Francisco	550,000	525,000	.045	.045
San Joaquin	285,500	347,500	.055	.051
San Luis Obispo	30,000	30,000	.05	.05
San Mateo	208,000	184,000	.041	.05
Santa Barbara	16,200	14,400	.05	.055
Santa Clara	246,000	279,500	.048	.042
Santa Cruz	160,000	180,000	.05	.05
Shasta				
Sierra				
Siskiyou				
Solano	238,000	229,000	.05	.05
Sonoma	211,000	206,500	.05	.05
Stanislaus	161,000	158,800	.05*	.05
Sutter	16,000		.06	
Tehama	58,000	142,000	.047	.05
Trinity				
Tulare	189,000	233,500	.052	.06
Tuolumne	18,000	17,000	.05	.05
Ventura	185,000	149,000	.05	.05
Yolo	138,000	130,000	.05	.05
Yuba	39,000	3,700	.055	.045
Totals	$12,349,843	$13,361,189	*$0.0516	*$0.0514

*Average.

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TABLE No. 21.

Statistics of Secondary (High) Schools. Showing Average Annual Salary Paid Teachers.

Counties	1915		Principals				Regular teachers				Special teachers			
	Men	Women	No.	Men	No.	Women	No.	Men	No.	Women	No.	Men	No.	Women
Alameda	$1,706 79	$1,472 53	10	$2,707 00			102	$1,391 89	189	$1,517 72	3	$1,120 00	7	$1,131
Alpine														
Amador	1,400 00	1,268 00	3	1,583 33			1	1,200 00	5	1,120 00	2	1,150 00	2	1,100
Butte	1,462 50	961 25	4	2,200 00			7	1,230 86	20	1,032 75	3	1,200 00	3	1,000
Calaveras	1,600 00	1,120 00	2	1,800 00			2	1,350 00	4	1,175 00				
Colusa	1,555 00	1,103 12	5	1,900 00			4	1,275 00	16	1,125 00				
Contra Costa	1,777 57	1,162 94	6	2,236 36	1	$1,400 00	4	1,477 50	32	1,233 12	3	1,166 67	5	728
Del Norte	1,750 00	1,025 00	1	1,800 00					3	1,050 00	1	1,100 00	1	1,000
El Dorado	1,400 00	1,166 66	1	1,800 00			1	1,200 00	3	1,166 66				
Fresno	1,565 00	1,201 17	11	2,095 45	8	1,403 12	36	1,495 86	45	1,239 11	19	1,440 52	12	1,262
Glenn	*1,135 71	1,060 00	2	2,160 00			3	1,283 33	5	1,060 00	2	1,225 00	2	950
Humboldt	1,516 07	1,151 35	4	1,875 00			6	1,300 00	21	1,113 21	3	1,300 00	1	1,000
Imperial	1,676 19	1,101 92	5	2,460 00			12	1,407 50	17	1,186 17	8	1,383 37	10	956
Inyo	1,413 75	1,125 00	2	1,750 00			2	1,125 00	5	1,055 00			2	1,083
Kern	1,537 19	1,081 33	4	2,000 00	1	1,800 00	15	1,513 33	19	1,149 00	7	1,414 00	6	916
Kings	1,577 31	1,195 83	3	1,983 33			5	1,410 00	11	1,240 90	4	1,387 50	4	975
Lake	1,162 50	962 50	2	1,750 00			2	1,200 00	4	1,100 00				
Lassen	1,395 00	1,114 16	1	1,800 00			2	1,282 50	3	1,095 00				
Los Angeles	1,631 50	1,443 30	37	2,625 38	1	3,000 00	268	1,727 95	563	1,468 04	219	1,524 13	355	1,449
Madera	1,150 00	970 11	2	1,540 00			1	1,300 00	5	1,169 50	2	975 00	1	1,200
Marin	1,510 50	1,069 00	2	2,200 00			3	1,633 00	13	1,311 00	5	1,436 00	4	970
Mariposa	1,350 00		1	1,600 00					1	1,200 00				
Mendocino	1,592 95	966 96	7	1,714 28			5	1,220 00	19	1,094 74	2	700 00		
Merced	1,595 83	1,143 18	6	1,950 00			3	1,366 67	16	1,159 37	4	837 50	9	955
Modoc	1,500 00	1,064 00	3	1,862 92			1	1,100 00	6	1,050 00	2	1,175 00	2	1,075
Mono														
Monterey	1,656 00	1,228 00	5	2,116 00			4	1,550 00	19	1,205 00	5	1,370 00	4	862
Napa	1,642 50	1,152 85	3	1,966 66			4	1,370 00	10	1,120 00	2	1,500 00	5	1,100
Nevada	1,299 00	1,147 23	3	1,933 33			3	1,386 66	12	1,105 00				
Orange	1,439 00	1,183 01	5	2,470 00			31	1,366 13	38	1,244 00	15	1,361 60	23	1,167
Placer	1,360 00	1,283 33	3	1,966 66			7	1,675 00	15	1,175 00	1	350 00	1	350
Plumas	1,500 00	1,200 00	1	1,800 00					3	1,200 00				
Riverside	1,267 00	909 00	10	1,745 00	1	1,450 00	21	1,458 00	34	1,137 00	10	1,093 00	13	891
Sacramento	1,253 55	1,296 14	5	1,940 00			37	1,293 60	47	1,226 54				
San Benito	1,303 00	1,316 66	1	2,400 00			3	1,233 30	3	1,316 66				

San Bernardino	1,395 00	1,029 63	8	2,119 00	-----	-----	24	1,386 00	33	1,264 00	21	1,464 00	27	1,125 00
San Diego	1,499 37	1,175 81	12	1,627 83	1	1,400 00	48	1,445 33	70	1,330 53	26	1,432 65	25	1,216 62
San Francisco	1,501 00	1,536 00	8	2,415 00	-----	-----	56	1,501 71	61	1,546 80	38	1,277 68	44	1,265 45
San Joaquin	1,712 50	1,249 85	4	2,162 50	-----	-----	14	1,656 65	22	1,305 77	7	1,505 68	5	1,077 81
San Luis Obispo	1,513 00	1,259 50	3	1,950 07	-----	-----	6	1,471 70	8	1,176 77	2	825 00	4	677 50
San Mateo	1,914 50	1,292 59	3	2,366 66	-----	-----	4	1,600 00	12	1,056 45	4	1,810 00	7	1,077 14
Santa Barbara	1,562 04	1,131 65	5	2,120 00	-----	-----	8	1,562 50	16	1,287 50	12	1,174 13	6	997 16
Santa Clara	1,607 41	1,250 73	8	2,073 93	-----	-----	18	1,534 44	57	1,215 20	17	1,505 53	26	1,132 10
Santa Cruz	1,673 17	1,106 92	2	1,950 00	-----	-----	6	1,516 00	19	1,195 00	4	1,375 00	5	1,010 00
Shasta	1,408 62	1,088 88	3	1,875 00	-----	-----	4	1,350 00	6	1,105 00	4	1,412 50	2	1,000 00
Sierra	1,800 00	1,200 00	1	1,800 00	-----	-----	-----	-----	2	1,200 00	-----	-----	-----	-----
Siskiyou	1,640 00	1,172 73	2	2,300 00	1	1,435 00	4	1,387 50	8	1,175 00	-----	-----	3	1,183 33
Solano	1,596 15	1,195 80	6	2,133 33	-----	-----	5	1,410 00	25	1,180 80	3	1,333 33	5	1,074 00
Sonoma	1,680 00	1,129 72	7	1,835 71	-----	-----	9	1,601 48	34	1,175 83	4	937 50	4	300 00
Stanislaus	1,451 00	1,175 40	8	1,655 55	-----	-----	14	1,403 57	29	1,160 34	6	1,036 16	10	650 00
Sutter	1,471 66	1,202 50	1	1,800 00	-----	-----	2	1,200 00	4	1,200 00	-----	-----	-----	-----
Tehama	1,418 55	1,150 00	2	2,125 00	-----	-----	4	1,140 15	8	1,156 15	3	826 66	3	1,133 33
Trinity	1,300 00	1,000 00	1	1,600 00	-----	-----	-----	-----	2	1,000 00	1	1,000 00	-----	-----
Tulare	1,470 17	1,133 25	9	2,077 77	-----	-----	19	1,357 00	37	1,156 62	10	1,305 00	11	1,100 00
Tuolumne	1,220 00	1,212 50	2	1,900 00	-----	-----	1	1,200 00	6	1,066 00	3	1,233 00	1	1,000 00
Ventura	1,655 88	1,211 05	5	2,223 33	-----	-----	6	1,343 33	15	1,255 33	7	1,025 00	7	1,075 00
Yolo	1,364 50	1,164 57	2	1,825 00	1	1,600 00	4	1,362 50	13	1,161 53	1	1,000 00	-----	-----
Yuba	1,300 00	930 60	2	1,905 00	-----	-----	4	1,565 00	4	1,076 25	1	120 00	4	807 50
Totals	†$1,502 96	†$1,157 20	264	†*$2,104 22	15	†*$1,574 00	856	†*$1,455 85	1,697	†*$1,331 40	496	†*$1,295 41	671	†*$1,271 70

†Average.

*Previous to 1916 average salary of teachers was divided into men and women. For 1916 the reports are filed as given above. Special teachers often teach part time.

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GENERAL SCHOOL STATISTICS.

TABLE No. 22. Statistical Summary by Years of Kindergarten, Elementary and High Schools.

TABLE No. 23. Statistical Summary, Showing Receipts and Expenditures for Kindergarten, Elementary and High Schools.

TABLE No. 24. Total Expenditure by Counties for Salaries and Expenses of County Superintendents.

TABLE No. 25. Total Expenditure by Counties in Payment of Salaries and Expenses of Members of County Boards of Education.

TABLE No. 26. Expenditure by Cities for City Boards and for City Superintendents and Deputies and Expenses of These Officers.

TABLE No. 26a. Expenses of Office of Superintendent of Public Instruction and State Board of Education.

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TABLE No. 22.

GENERAL.

Statistical Summary, by Years, of the Kindergarten, Night, Primary and Grammar and High Schools of California, from 1851 to 1916, inclusive.

Years	Number of teachers	Number of children enrolled on school register	Average daily attendance
1851	----------	1,846	----------
1852	----------	3,314	----------
1853	----------	4,193	2,020
1854	214	9,746	4,635
1855	301	----------	6,442
1856	392	----------	8,495
1857	486	17,232	9,717
1858	517	19,822	11,183
1859	744	23,519	13,364
1860	831	26,993	14,750
1861	932	31,786	17,804
1862	962	36,566	19,262
1863	919	36,540	19,992
1864	1,079	47,588	24,794
1865	1,155	50,089	29,592
1866	1,268	50,273	----------
1867	1,389	62,227	----------
1868	1,590	65,828	43,681
1869	1,687	73,754	49,802
1870	1,869	85,808	54,271
1871	2,052	91,332	64,286
1872	2,301	94,720	65,700
1873	2,336	107,593	69,461
1874	2,452	120,240	72,283
1875	2,693	130,930	78,027
1876	2,894	140,468	83,391
1877	3,077	147,863	89,539
1878	3,393	154,064	94,696
1879	3,453	156,769	98,468
1880	3,595	158,765	100,966
1881	3,737	163,855	105,541
1882	3,777	168,024	107,177
1883	3,930	174,611	112,594
1884	4,083	179,801	124,814
1885	4,242	184,001	116,028
1886	4,444	189,220	125,718
1887	4,888	196,907	129,297
1888	4,938	207,050	132,277
1889	5,255	215,905	143,733
1890	5,434	221,756	146,589
1891	5,659	229,986	153,599
1892	5,891	238,106	158,875
1893	6,136	232,501	157,673
1894	6,257	235,837	164,664
1895	6,589	241,322	170,861
1896	6,885	249,335	176,083
1897	7,190	247,061	180,209
1898	7,432	259,459	185,424
1899	7,366	265,364	195,540
1900	7,605	269,736	197,395
1901	7,810	258,977	188,730
1902	8,072	264,038	197,217
1903	8,333	288,776	212,884
1904	8,652	299,038	222,182
1905	9,026	315,226	239,491
1906	9,371	328,127	248,722
1907	9,714	335,645	247,880
1908	10,222	347,193	262,522
1909	10,747	352,278	275,272
1910	11,369	368,391	286,730
1911	12,156	386,911	302,657
1912	13,248	414,078	323,657
1913	14,524	446,916	346,443
1914	15,618	501,021	374,493
1915	16,794	508,590	393,068
1916	17,860	540,688	410,978

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TABLE No. 23.

GENERAL SUMMARY: 1851-1916.

Statement, by Years, Showing the Amount of Receipts and Expenditures for Public Primary, Grammar, High and Kindergarten Schools of the State of California, from 1851 to 1916, inclusive.

Years	Total amount of state school fund apportioned	Total amount raised by county and city taxes	Total amount raised from miscellaneous sources	Amount paid for salaries of teachers	Amount paid for repairs, fuel, and contingent expenses	Amount paid for libraries	Amount paid for apparatus	Amount paid for sites, buildings, and furniture	Total expenditures
1851				*	*	*	*	*	*
1852			$2,417 00	$21,355 42	$2,000 00	*	*	$4,748 32	$28,103 74
1853			10,626 00	30,215 00	10,525 00	*	*	13,491 01	54,231 01
1854	$52,061 00	$157,702 00	42,557 00	85,860 33	31,156 45	$3,990 52	*	151,822 52	272,829 82
1855	63,662 00	119,128 00	39,395 00	166,048 45	32,631 07	1,054 57	*	77,197 62	276,931 71
1856	69,961 00	121,639 00	28,619 00	200,941 00	49,668 84	2,127 16	*	52,484 00	305,221 00
1857	78,057 00	148,989 00	55,035 00	192,613 00	52,533 44	2,942 56	*	59,743 00	307,832 00
1858	53,405 00	162,870 00	85,107 00	203,276 37	45,395 92	3,042 78	*	88,199 70	339,914 77
1859	72,319 00	205,196 00	97,534 00	264,972 37	69,396 38	2,368 58	*	90,266 42	427,003 75
1860	81,118 00	230,514 00	122,858 00	311,165 38	50,989 41	1,756 09	*	110,352 86	474,263 74
1861	81,461 00	241,861 00	114,397 00	311,501 91	54,493 99	2,299 28	*	101,818 38	470,113 56
1862	75,412 00	294,828 00	141,806 00	330,249 02	59,479 76	2,225 57	*	49,274 62	441,228 97
1863	145,537 00	328,554 00	68,209 00	328,338 02	58,271 97	594 75	$2,271 22	93,931 53	483,407 49
1864	132,217 00	260,842 00	84,084 00	411,101 01	69,562 36	1,132 21	6,010 84	167,393 44	655,199 86
1865	168,928 00	390,306 00	91,181 00	526,585 14	89,056 57	5,792 01	3,777 86	257,804 98	883,016 56
1866	132,410 00	470,668 00	79,600 00	551,462 02	116,577 47	2,074 81	4,059 47	185,056 42	859,230 19
1867	268,910 00	595,718 00	81,066 00	696,110 28	206,412 25	10,125 01	5,431 83	238,070 64	1,156,150 01
1868	252,603 00	654,738 00	73,986 00	763,639 15	143,518 56	19,069 56	4,061 72	221,118 43	1,151,407 42
1869	290,796 00	847,229 00	66,531 00	873,814 07	185,672 91	20,415 76	4,915 83	205,766 95	1,290,585 52
1870	360,447 00	839,756 00	63,441 00	976,937 75	179,070 23	29,984 22	3,692 27	339,362 37	1,529,046 84
1871	423,853 00	923,809 00	46,660 00	1,103,125 14	289,691 57	26,766 30	3,689 46	390,158 50	1,713,430 97
1872	424,022 00	1,249,943 00	232,075 00	1,282,799 15	277,900 99	25,793 54	4,720 13	290,119 01	1,881,332 82
1873	430,220 00	1,541,597 00	310,502 00	1,434,366 93	275,674 70	24,879 48	4,365 70	374,069 44	2,113,356 25
1874	428,414 12	1,332,208 82	345,316 95	1,560,830 16	331,952 30	21,752 82	4,152 80	192,467 25	2,111,155 33
1875	1,212,252 03	1,115,530 06	676,259 64	1,810,479 62	381,806 62	33,962 72	10,713 02	421,279 36	2,658,241 34
1876	1,317,603 84	1,240,637 31	158,206 40	1,983,939 96	374,222 49	48,757 50	10,974 66	440,706 37	2,858,600 98
1877	1,474,600 26	1,486,233 73	137,100 31	2,149,435 70	378,754 50	55,148 64	18,964 19	147,426 43	2,749,729 46
1878	1,579,195 52	1,393,014 96	106,396 84	2,272,551 19	426,707 66	53,947 85	12,513 65	390,094 92	3,155,815 27
1879	1,423,941 75	1,446,852 04	92,852 41	2,285,732 39	371,992 13	46,490 50	13,565 73	293,126 38	3,010,907 13
1880	1,506,171 84	1,393,572 44	104,824 80	2,207,043 85	400,867 61	44,546 39	21,842 68	190,270 94	2,864,571 42
1881	1,790,457 62	1,343,306 02	32,048 79	2,346,056 58	401,572 56	79,432 10	15,694 04	204,849 66	3,047,604 94

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1882	1,882,121 67	1,260,843 64	23,046 88	2,406,780 68	411,117 17	63,060 32	20,618 98	221,089 05	3,122,666 20
1883	1,890,724 20	1,315,818 96	32,462 71	2,511,078 40	419,760 85	61,032 26	26,504 11	293,839 66	3,312,215 28
1884	1,894,191 00	1,411,543 56	27,715 40	2,573,623 54	415.587 39	59,642 08	23,204 69	292,165 85	3,364,223 55
1885	1,831,171 44	1,694,959 45	53,140 83	2,583,403 46	433,972 56	64,056 08	16,787 03	466,811 74	3,565,030 87
1886	1,890,733 32	1,690,704 86	138,596 48	2,710,621 82	422,843 30	64,627 32	24,833 01	283,006 18	3,505,931 63
1887	2,027,789 40	1,793,809 95	51,250 25	2,912,859 30	480,455 63	64,189 18	23,679 10	408,704 96	3,889,888 17
1888	2,168,686 08	2,170,058 19	259,554 55	3,083,027 24	527,035 55	58,229 04	31,534 85	621,554 82	4,321,381 50
1889	2,531,880 00	2,442,254 64	337,006 91	3,343,191 80	624,810 95	59,522 72	33,791 82	935,548 42	4,996,865 71
1890	2,635,716 10	2,293,335 75	98,092 22	3,594,588 98	706,995 12	71,121 94	42,442 85	703,947 79	5,119,096 68
1891	2,662,200 08	2,249,975 72	134,192 19	3,713,544 37	732,148 98	72,714 87	45,352 20	548,740 11	5,112,500 53
1892	2,354,786 00	2,464,706 04	266,455 77	3,874,346 88	750,929 32	72,961 08	45,424 77	608,229 27	5,351,891 32
1893	3,403,072 72	2,404,898 76	774,090 08	4,055,888 51	806,717 80	76,677 51	46,837 62	723,565 66	5,709,687 10
1894	2,770,661 84	2,388,359 31	337,815 12	4,005,721 80	752,757 68	61,890 04	30,130 55	574,293 10	5,424,793 17
1895	2,829,005 74	2,472,540 41	508,203 22	4,081,340 44	793,834 91	63,601 20	46,915 95	698,215 59	5,683,908 09
1896	3,043,884 60	2,517,827 78	256,021 31	4,291,481 12	899,861 54	71,249 23	35,492 78	503,674 80	5,801,759 47
1897	2,943,310 10	2,677,945 07	156,638 37	4,418,544 67	899,726 74	68,719 53	18,885 63	441,871 03	5,847,747 60
1898	3,106,072 72	2,684,416 96	364,030 62	4,582,625 71	1,010,710 13	72,975 97	16,693 40	494,899 39	6,177,904 60
1899	3,076,472 40	2,690,705 16	172,053 24	4,562,994 54	1,025,473 62	‡88,341 06	----------	397,793 15	6,074,602 37
1900	3,567,763 56	2,861,409 16	296,345 64	4,850,804 22	994,727 41	‡81,749 79	----------	268,157 32	6,195,438 74
1901	3,485,126 45	2,888,046 10	93,171 60	4,685,144 20	1,080,040 37	‡82,995 12	----------	525,050 16	6,373,229 85
1902	3,584,001 45	3,076,699 73	99,687 86	4,748,472 75	1,329,359 68	‡88,923 05	----------	439,305 94	6,606,061 42
1903	3,590,390 40	3,887,778 68	699,758 22	5,665,431 02	1,461,838 79	‡105,016 92	----------	937,879 47	8,170,166 20
1904	3,926,972 18	4,644,967 95	1,299,565 92	6,027,850 53	1,500,815 22	‡138,439 04	----------	1,734,359 36	9,401,464 15
1905	4,234,241 02	4,580,258 78	1,961,805 35	6,460,879 67	1,675.564 94	‡133,457 82	----------	1,408,100 86	9,678,003 29
1906	3,880,740 82	3,681,439 68	1,603,236 84	7,003,176 86	1,805,867 52	‡148,351 94	----------	1,983,163 70	10,940,560 02
1907	‡4,300,379 23	7,394,551 55	593,194 87	7,422.575 41	2,011,921 54	163,996 70	----------	2,620,211 24	12,218,704 89
1908	4,497,337 81	8,899.459 82	630,502 51	8,720,931 65	2,307,417 49	164,413 82	----------	3,229,940 91	14,423,703 87
1909	4.761,954 30	11,993,868 62	436,490 96	9,325,688 76	2,472.519 54	186,428 37	----------	4,000,619 07	15,985,255 74
1910	5,101,950 89	13,308,417 90	415,887 54	10,233,858 10	2,926,957 70	233,163 59	----------	4,536,538 36	17,930,517 75
1911	5,682,117 16	13,833,191 32	623,852 21	11,381,661 72	3,777,912 90	252,923 02	----------	4,958,430 18	20,370,927 82
1912	6,110,857 30	19,423,138 34	507,038 56	12,687,314 29	3,831,017 88	243,136 22	----------	7,217,152 22	23,978,620 61
1913	5,773,467 02	27,749,637 40	526,294 63	14,603,061 71	4,833,792 73	289,151 89	----------	5,828,913 03	25,554,419 36
1914	6,073,096 14	20,560,162 99	464,868 39	16,314,791 25	4,622,736 78	310,089 72	----------	5,332,285 92	26,579,903 62
1915	6,170,971 30	25,523,371 66	6,203,654 10	17,067,504 16	5,919,066 53	299,152 61	----------	8,406,237 98	31,691,961 28
1916†	6,546,304 12	24,620,452 48	1,465,325 71	17,715,673 87	3,777,488 49	479,584 70	----------	8,153,908 63	30,126,651 69

*Not reported.

‡Does not include balance on hand.

†There was a balance on hand of $7,829,181.73 at beginning of year that is not included in receipts. Balances are not included in year's receipts.

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TABLE No. 24.

Miscellaneous Statistics, Showing County Expenses for Schools, Salary of County Superintendent and Deputies and Expenses of Office for Year 1916.

Counties	Annual salary, superintendent and deputies	Traveling expenses	Postage and expressage	Other expenses	Total
Alameda	$11,200 00	$660 00	$306 00	----------	$12,166 00
Alpine	200 00	5 00	6 00	$2 00	213 00
Amador	1,500 00	159 60	84 00	----------	1,743 60
Butte	2,720 00	352 56	125 00	604 53	3,802 09
Calaveras	1,500 00	114 30	67 78	81 00	1,763 08
Colusa	2,400 00	241 45	25 00	----------	2,666 45
Contra Costa	4,450 00	----------	163 00	----------	4,613 00
Del Norte	720 00	30 25	20 00	----------	770 25
El Dorado	1,800 00	192 75	120 07	----------	2,112 82
Fresno	7,800 00	1,499 82	197 91	----------	9,497 73
Glenn	2,700 00	400 00	97 00	20 00	3,217 00
Humboldt	3,400 00	404 50	126 50	206 35	4,137 35
Imperial	3,563 44	333 61	----------	704 34	4,601 39
Inyo	1,500 00	100 00	50 00	75 00	1,725 00
Kern	7,200 00	33 91	190 51	554 48	7,978 90
Kings	2,400 00	85 00	90 00	154 25	2,729 25
Lake	1,000 00	64 35	40 00	37 35	1,141 70
Lassen	1,500 00	286 85	88 00	----------	1,874 85
Los Angeles	23,766 00	419 42	905 00	1,847 30	26,931 72
Madera	2,300 00	204 55	76 11	----------	2,580 66
Marin	3,600 00	314 45	99 00	----------	4,013 45
Mariposa	600 00	238 70	66 00	59 99	964 69
Mendocino	2,400 00	892 30	157 75	200 00	3,650 05
Merced	3,179 71	316 65	146 00	----------	3,642 36
Modoc	1,500 00	188 90	46 62	48 14	1,783 66
Mono	400 00	100 00	23 95	47 29	571 24
Monterey	3,447 00	731 30	200 00	1,159 34	5,537 64
Napa	2,500 00	334 90	116 00	719 78	3,670 68
Nevada	2,000 00	137 10	93 00	----------	2,230 10
Orange	3,150 00	190 10	100 00	180 85	3,620 95
Placer	2,400 00	214 45	122 98	530 24	3,267 67
Plumas	800 00	199 30	60 00	----------	1,059 30
Riverside	3,600 00	690 40	120 00	456 96	4,867 36
Sacramento	5,100 00	103 00	206 00	1,002 98	6,411 98
San Benito	1,800 00	295 75	76 00	----------	2,171 75
San Bernardino	3,600 00	330 25	----------	100 00	4,030 25
San Diego	7,100 28	705 78	294 96	1,207 97	9,308 99
San Francisco	23,260 00	540 00	----------	----------	23,800 00
San Joaquin	4,500 00	----------	190 00	50 00	4,740 00
San Luis Obispo	2,400 00	410 05	123 00	203 06	3,136 11
San Mateo	2,100 00	265 25	84 00	----------	2,449 25
Santa Barbara	3,080 00	359 05	140 00	174 62	3,753 67
Santa Clara	4,622 00	229 90	160 25	554 27	5,566 42
Santa Cruz	2,400 00	366 10	130 00	----------	2,896 10
Shasta	2,400 00	493 55	222 00	----------	3,115 55
Sierra	625 00	50 75	36 00	9 25	721 00
Siskiyou	2,000 00	500 00	185 00	703 36	3,388 36
Solano	3,300 00	181 25	72 00	558 63	4,111 88
Sonoma	3,500 00	288 75	170 00	----------	3,958 75
Stanislaus	3,020 00	397 50	120 00	193 60	3,731 10
Sutter	1,600 00	82 00	70 00	----------	1,752 00
Tehama	2,400 00	465 40	138 00	500 00	3,503 40
Trinity	1,000 00	80 25	52 00	98 96	1,231 21
Tulare	4,400 00	891 35	312 00	374 06	5,977 41
Tuolumne	1,000 00	101 50	70 00	----------	1,171 50
Ventura	2,880 00	400 00	126 00	20 00	3,426 00
Yolo	1,800 00	157 45	39 10	198 85	2,195 40
Yuba	1,800 00	190 00	18 25	110 00	2,118 25
Totals	$204,877 43	$18,021 35	$7,163 74	$13,748 80	$243,811 32

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Miscellaneous Statistics, Showing County Expenses for Schools and Expenses of Members of County Boards of Education, 1916.

Counties	Paid members, per diem	Amount paid for traveling expenses	Other expenses	Total expenses
Alameda	$2,715 00			$2,715 00
Alpine	25 00	$5 40	$15 60	46 00
Amador	888 00	37 75		917 75
Butte	1,255 00	184 60	90 00	1,529 60
Calaveras	735 00	38 80	12 75	786 55
Colusa	1,350 00	123 65		1,473 65
Contra Costa	1,195 00	238 40	907 25	2,340 65
Del Norte	425 00		8 00	433 00
El Dorado	1,560 00	62 00		1,622 00
Fresno	1,780 00	66 00		1,846 00
Glenn	1,765 00	48 00		1,813 00
Humboldt	755 00	115 20	68 20	938 40
Imperial	320 00	35 53	62 48	418 01
Inyo	110 00	78 00	25 80	213 80
Kern	1,443 00	8 70	427 75	1,879 45
Kings	1,225 00		224 70	1,449 70
Lake	915 00	36 70	55 20	1,006 90
Lassen	835 00	125 20		960 20
Los Angeles	1,600 00	86 80	439 82	2,126 62
Madera	650 00	44 50		694 50
Marin	695 00	177 80		872 80
Mariposa	690 00	18 00	34 00	742 00
Mendocino	1,476 50	230 20	60 00	1,766 70
Merced	1,265 00	285 60		1,550 60
Modoc	380 00	90 50		470 50
Mono	300 00	66 60		366 60
Monterey	1,002 50	397 60	193 85	1,593 95
Napa	1,250 00			1,250 00
Nevada	615 00	99 20		714 20
Orange	1,075 00	127 60	352 00	1,554 60
Placer	285 00	177 80		462 80
Plumas	835 00	205 00		1,040 00
Riverside	935 00	445 60	161 95	1,542 55
Sacramento	2,755 00	91 20		2,846 20
San Benito	750 00	74 00		824 00
San Bernardino	560 00	50 40	50 00	660 40
San Diego	780 00		172 45	952 45
San Francisco				
San Joaquin	1,375 00	235 50	75 00	1,685 50
San Luis Obispo	1,245 00	15 20	182 54	1,442 74
San Mateo	925 00	178 50		1,103 50
Santa Barbara	895 00	355 40	104 00	1,354 40
Santa Clara	2,165 00	238 45	351 83	2,755 28
Santa Cruz	1,190 00	201 00		1,391 00
Shasta	820 00	59 25		879 25
Sierra	225 00	88 40	25 00	338 40
Siskiyou	1,655 00	970 00	568 35	3,193 35
Solano	885 00	134 10	267 80	1,286 90
Sonoma	990 00	176 40	105 00	1,271 40
Stanislaus	765 00	61 70	120 19	946 89
Sutter	1,050 00	60 20		1,110 20
Tehama	535 00	137 40	500 00	1,172 40
Trinity	325 00	103 80		428 80
Tulare	878 43	156 05	119 05	1,153 53
Tuolumne	887 60	40 00	198 95	1,126 55
Ventura	825 00	151 20		976 20
Yolo	879 50	108 00	201 95	1,189 45
Yuba	1,750 00	252 00		2,002 00
Totals	$57,452 53	$7,594 88	$6,181 46	$71,228 87

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Miscellaneous Statistics, Showing City Expenses for Schools, Expenses of Offices of City Superintendents and Boards of Education, 1916.

Counties	Total annual salary paid	Total traveling expenses	Other expenses	Total
Alameda	$64,300 00	$1,946 80	$843 48	$67,090 28
Alpine				
Amador				
Butte	5,050 00		200 00	5,250 00
Calaveras				
Colusa				
Contra Costa	4,300 00			4,300 00
Del Norte				
El Dorado				
Fresno	7,940 00			7,940 00
Glenn	3,220 00			3,220 00
Humboldt				
Imperial	4,620 00			4,620 00
Inyo				
Kern				
Kings				
Lake				
Lassen				
Los Angeles	50,425 38	707 99	6,424 05	57,557 42
Madera				
Marin	3,000 00			3,000 00
Mariposa				
Mendocino				
Merced				
Modoc				
Mono				
Monterey	1,000 00		25 00	1,025 00
Napa				
Nevada	4,100.00	48 05		4,148 05
Orange	4,576 00	1 00	75 00	4,652 00
Placer				
Plumas				
Riverside	3,180 00			3,180 00
Sacramento	6,484 17	23 55	1,217 83	7,725 55
San Benito				
San Bernardino	2,400 00	315 00	1,400 00	4,115 00
San Diego	13,960 00	360 00		14,320 00
San Francisco	21,900 00	1,500 00	16,616 00	40,016 00
San Joaquin	9,600 00			9,600 00
San Luis Obispo	2,500 00		29 50	2,529 50
San Mateo				
Santa Babrara	3,000 00			3,000 00
Santa Clara	5,200 00		50 00	5,250 00
Santa Cruz	3,180 00		142 53	3,322 53
Shasta				
Sierra				
Siskiyou				
Solano	3,180 00	59 06	135 48	3,374 54
Sonoma	2,750 00			2,750 00
Stanislaus	2,700 00	11 68		2,711 68
Sutter				
Tehama				
Trinity				
Tulare				
Tuolumne				
Ventura	2,000 00		10 00	2,010 00
Yolo	600 00			600 00
Yuba				
Totals	$235,165 55	$4,973 13	$27,168 87	$267,307 55



Expenses of Office of Superintendent of Public Instruction and State Board of Education for Year 1915-1916.

July 1, 1914, to June 30, 1915—	
Traveling expenses and contingent office expenses	$1,124 93
Postage, telegraph and express	1,007 97
Salary, Superintendent of Public Instruction	5,000 00
Salary, office force	9,380 00
	$16,512 90
July 1, 1915, to June 30, 1916—	
Traveling expenses and contingent office expenses	$1,829 32
Postage, telegraph and express	1,195 59
Salary, Superintendent of Public Instruction	5,000 00
Salary, office force	9,560 00
	$17,584 91
July 1, 1914, to June 30, 1915—	
Cost of life diplomas*	$856 40
Cost of high school credentials*	209 25
Per diems, members of state board	3,345 00
Traveling expenses, members of state board	2,125 44
Traveling expenses, commissioners	1,709 61
Salaries, clerical assistants	2,707 42
Postage	1,170 00
Express	47 12
Telephones	112 12
Telegraph	89 07
Office fittings	1,212 78
Miscellaneous	232 36
Salary, three commissioners at $4,000 each	12,000 00
	$25,816 57

Expenses of State Board of Education.

July 1, 1915, to June 30, 1916—	
Cost of life diplomas*	$941 60
Cost of high school credentials*	163 50
Per diem, members of state board	3,900 00
Traveling expenses, members of state board	2,316 35
Traveling expenses, commissioners	2,222 50
Salaries, clerical assistants	5,694 81
Postage	1,250 60
Express	45 12
Publicity	85 67
Freight	16 11
Rent of Los Angeles office	64 12
Stationery, from purchasing agent	151 70
Printing	1,579 78
Telegraph	111 73
Telephone	245 90
Office fittings	562 73
Miscellaneous	295 72
Salary, commissioners, at $4,000 each	12,000 00
	$31,647 94

*Paid in by the applicants in form of $2 fees.



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STATE NORMAL SCHOOLS.

TABLE No. 27. Number of Teachers, Students Enrolled, Receipts and Expenditures, Valuation of Property, Number of Volumes in Libraries, Number of Graduates.

TABLE No. 28. Receipts and Expenditures by Schools for years Closing June 30, 1915 and 1916. Expenditures, 1915 and 1916.

TABLE No. 29. Valuation of All Normal Property; Number of Acres to Normal Grounds, and Number of Books in Normal School Libraries.

TABLE No. 30. Number of Graduates—Boys and Girls—1915 and 1916, and Total Graduates of Each School Since Establishment.

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Statistics of State Normal Schools, Showing Teachers Employed.

Name and location of school	Men		Women		Total	
	1915	1916	1915	1916	1915	1916
Chico	9	9	12	11	21	20
Fresno	10	9	16	10	26	19
Humboldt	5	6	4	9	9	15
Los Angeles	17	20	69	69	86	89
San Diego	7	6	21	17	28	23
San Francisco	6	7	21	26	27	33
San Jose	11	11	39	46	50	57
Santa Barbara	4	7	16	21	20	28
Totals	69	75	198	209	267	284

Pupils Enrolled—Normal Department.

Name and location of school	Boys		Girls		Total	
	1915	1916	1915	1916	1915	1916
Chico	51	71	271	318	322	389
Fresno	15	15	273	328	288	343
Humboldt	40	35	119	176	159	211
Los Angeles	67	100	1,741	1,682	1,808	1,782
San Diego	8	12	331	345	339	357
San Francisco		5	494	584	494	589
San Jose	54	60	892	948	946	1,008
Santa Barbara	60	84	210	234	270	318
Totals	295	382	4,331	4,615	4,626	4,997

Training School.

Name and location of school	Boys		Girls		Total	
	1915	1916	1915	1916	1915	1916
Chico	189	206	233	223	422	429
Fresno	155	196	129	183	284	379
Humboldt	29	30	20	21	49	51
Los Angeles	236	218	292	215	528	433
San Diego	163	180	224	245	387	425
San Francisco	374	372	309	340	683	712
San Jose	389	381	421	443	810	824
Santa Barbara†						
Totals	1,535	1,583	1,628	1,670	3,163	3,253

†No training school. Use city schools.

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TABLE No. 29.

Statistics of State Normal Schools, Showing Valuation of Property for Years Closing June 30, 1915 and 1916.

Name of school	Area of grounds, acres	Grounds	Buildings	Furniture	Library books	Apparatus	Supplies on hand	Total valuation
1915.								
Chico	11	$75,000	$230,029	$13,933	$18,422	$10,842	----------	$348,226
Fresno	25	37,000	11,000	4,735	1,806	2,939	----------	57,480
Humboldt	50.5	10,000	3,291	2,641	301	----------	----------	16,233
Los Angeles	25	110,000	600,000	----------	150,000	----------	----------	860,000
San Diego	16.5	100,000	233,250	15,500	11,500	8,260	----------	368,510
San Francisco	.17	120,000	103,000	14,500	7,500	15,000	----------	260,000
San Jose	18.3	100,000	455,000	40,000	20,000	10,000	----------	625,000
Santa Barbara	14	21,000	109,000	23,840	2,900	3,960	----------	160,700
Totals	159.47	$573,000	$1,744,570	$115,149	$212,429	$51,001	----------	$2,696,149
1916.								
Chico	11	$75,000	$231,000	$14,138	$18,919	$10,273	$1,470	$350,800
Fresno	25	37,000	370,000	3,500	5,000	6,000	500	422,000
Humboldt	51	51,000	14,730	5,641	1,450	----------	15	72,836
Los Angeles	25	110,000	587,048	83,872	29,235	----------	2,543	812,698
San Diego	16.5	100,000	210,156	23,482	13,563	6,192	250	353,643
San Francisco	.17	120,000	120,000	20,500	8,500	2,700	8,500	280,200
San Jose	18.3	50,000	463,150	45,000	25,000	10,000	200	593,350
Santa Barbara	14	27,500	120,500	31,240	3,200	3,960	500	186,900
Totals	160.97	$570,500	$2,116,584	$227,373	$104,867	$39,125	$3,978	$3,072,427

Statistics of Normal Schools, Showing Number of Books in Normal School Libraries.

Name of school	1915				1916			
	On hand beginning of year	Bought or donated	Lost or destroyed	Total at close of year	On hand beginning of year	Bought or donated during year	Lost or destroyed during year	Total at close of year
Chico	18,406	1,619	863	19,162	19,162	1,750	410	20,502
Fresno	1,120	580	3	1,697	1,665	1,210	----------	2,875
Humboldt	1,029	382	18	1,393	667	1,394	4	2,057
Los Angeles	24,638	1,625	258	26,005	26,006	1,712	3,064	24,654
San Diego	13,574	----------	----------	14,702	14,702	1,532	631	15,603
San Francisco	14,987	1,812	715	16,084	16,084	1,794	464	17,414
San Jose	14,346	1,231	----------	15,577	15,577	1,264	130	16,711
Santa Barbara	3,294	161	3	3,452	3,452	223	4	3,671
Totals	91,394	8,538	1,860	98,072	97,315	10,870	4,707	103,487

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TABLE No. 30.

Statistics of State Normal Schools, Showing the Number of Graduates From Each School for the Years Closing June 30, 1915, and June 30, 1916, and the Total Since Organization.

Name of school	Number of graduates		Grand total since organization
	1915	1916	
Chico—			
Boys	11	15	212
Girls	93	92	1,258
Totals	104	107	1,470
Fresno—			
Boys	8	1	27
Girls	81	110	411
Totals	89	111	438
Humboldt—			
Boys		5	5
Girls	14	37	52
Totals	14	42	57
Los Angeles—			
Boys	22	28	299
Girls	695	545	5,000
Totals	717	573	5,299
San Diego—			
Boys	2	4	52
Girls	140	127	1,151
Totals	142	131	1,203
San Francisco—			
Boys			
Girls	181	188	13,095
Totals	181	188	13,095
San Jose—			
Boys	18	17	521
Girls	379	330	6,344
Total	397	347	6,865
Santa Barbara—			
Boys	34	23	56
Girls	156	86	351
Totals	190	109	407
Grand totals—			
Boys	95	93	1,172
Girls	1,739	1,515	15,962
Totals	1,834	1,608	17,134

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CALIFORNIA POLYTECHNIC SCHOOL.

TABLE No. 31. Number of Teachers, Number of Graduates, Receipts and Expenditures, Valuation of Property.

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TABLE No. 31.

Statistics of California Polytechnic School, at San Luis Obispo, for 1915 and 1916.

By R. W. RYDER, Director.

	1915	1916
Number of teachers employed:		
Men	11	12
Women	4	5
Totals	15	17
Students enrolled, 1914–1915:		
First year—men 42; women 14		
Second year—men 33; women 18		
Third year—men 20; women 9		
Specials—men 25; women 1		
Totals—men 120; women 42	162	
Graduates—men 17; women 5	22	
Students enrolled, 1915–1916:		
First year—men 55; women 16		
Second year—men 38; women 19		
Third year—men 24; women 11		
Fourth year—men --; women --		
Specials—men 11; women 2		
Extension specials—men 699; women 61		
Totals—men 827; women 109		936
No graduating class (end of three-year course).		

FINANCIAL STATEMENT, 1915 AND 1916.

	1915	1916
Salaries—		
Appropriation		$35,000 00
Balance	$38,140 63	
Administration	5,076 83	6,537 88
Faculty	28,673 80	28,574 60
Employees	4,390 00	2,381 66
Balance	2,950 66	35 86
Grounds—		
Appropriation		3,500 00
Balance	3,751 15	
Expended	3,596 57	3,462 94
Balance	154 58	37 06
Library—		
Appropriation		850 00
Balance	903 75	
Expended	668 30	738 16
Balance	235 45	111 84
Printing—		
Appropriation		750 00
Balance	931 63	
Expended	892 85	750 00
Balance	38 78	
Support—		
Appropriation		15,500 00
Balance	15,512 60	
Expended	14,565 76	15,040 31
Balance	948 22	459 63

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FINANCIAL STATEMENT, 1915 AND 1916—Continued.

	1915	1916
Contingent fund—		
Balance	$6,262 17	$7,225 80
Receipts:		
Dining hall and dormitory	9,011 15	7,286 88
Creamery, dairy, animal industry and farm	14,326 70	15,785 41
Expended	22,374 22	27,173 02
Balance	7,225 80	3,125 07
Special appropriations—		
Equipment, Chapter 291, 1915		4,000 00
Expenditure		3,923 86
Balance		76 14
Furniture, Chapter 512, 1911:		
Balance	803 45	
Expenditure	803 45	

Biennial Valuation of Property.

Area of ground, acres	311.04
Value of grounds, shrubs, orchards, roads, water, sewer and heating systems	$272,909 00
Value of buildings	186,100 00
Value of furniture	11,000 00
Value of apparatus	68,000 00
Value of stock and tools	17,400 00
Value of library	3,252 25
Total	$558,661 25

Recapitulation.

Total receipts	$89,643 93	$89,898 09
Total expenditures	81,041 78	88,582 43
Unexpended balance	$8,601 45	$1,315 66
Total value of property		$558,661 25
Total books in library	3,500	3,600

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INSTITUTION FOR THE DEAF AND THE BLIND.

TABLE No. 32. Enrollment, Number of Teachers, Receipts and Expenditures and Valuation of Property.

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BERKELEY, CAL., *July 24, 1916.*

L. E. MILLIGAN, Principal.

The enrollment of pupils for the two years ending June 30, 1916, has been as follows:

	1914-15	1915-16
Deaf boys	117	110
Deaf girls	75	69
	192	179
Blind boys	51	54
Blind girls	43	43
	94	97
Total enrollment, both classes	286	276

The number of teachers, including manual craft instructors, has been:

	1914-15	1915-16
Deaf department—		
Teachers, men	11	10
Teachers, women	12	14
	23	24
Blind department—		
Teachers, men	4	6
Teachers, women	9	9
	13	15
Totals, both departments	36	39

Receipts for the Year Ending June 30, 1915.

Salaries and wages, balance July 1, 1914	$802 13	
Salaries and wages, appropriation	65,000 00	
		$65,802 13
Support, balance July 1, 1914	$355 13	
Support, appropriation	30,000 00	
		30,355 13
Total		$96,157 26

Disbursements for the Year Ending June 30, 1915.

Salaries and wages	$65,799 21	
Support	30,350 32	
		96,149 53
Balance in treasury, June 30, 1915		$7 73

Contingent Fund for the Year Ending June 30, 1915.

Balance on hand July 1, 1914	$2,916 53	
Receipts	6,563 33	
		$9,479 86
Disbursements		7,124 22
Balance in treasury, June 30, 1915		$2,355 64

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Salaries and wages, appropriation	$70,000 00	
Support, appropriation	37,500 00	
Total		$107,500 00

Disbursements for the Year Ending June 30, 1916.

Salaries and wages	$69,109 15	
Support	34,318 74	
		103,427 89
Balance in treasury, June 30, 1916		$4,072 11

Contingent Fund for the Year Ending June 30, 1916.

Balance on hand July 1, 1915	$2,355 64	
Receipts	6,012 90	
Total		$8,368 54
Disbursements		6,838 46
Balance in treasury, June 30, 1916		$1,530 08

Valuation of Property Belonging to the California School for the Deaf and the Blind.

Land, 130 acres	$650,000 00
Buildings	527,500 00
Water	27,000 00
Equipment	67,335 77
	$1,271,835 77

Gifts and Bequests, June 30, 1916.

Loans	$64,800 00
Cash	6,445 79
Total	$1,343,081 56

Recapitulation.

	1915	1916
1. Number of teachers employed	36	39
2. Number of students enrolled	286	276
3. Receipts	$105,637 12	$115,868 54
4. Expenditures	$103,273 75	$116,266 35
5. Total valuation	$1,274,984 53	$1,343,081 56
6. Number of Braille books	800	1,500
7. Number of ink books	3,000	4,800
8. Number of graduates	19	21

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UNIVERSITY OF CALIFORNIA.

TABLE No. 33. Number of Teachers, Students, Receipts and Expenditures, Valuation of Property, Number of Books in Library, and Number of Graduates.

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Statistics of the University of California, showing Number of Professors, Teachers and Students, 1914–15, 1915–16.

By James Sutton, Recorder of the Faculties.

NUMBER OF PROFESSORS, LECTURERS AND INSTRUCTORS IN THE UNIVERSITY OF CALIFORNIA.

1914-15.		1915-16.	
Men	386	Men	412
Women	25	Women	21
Total	411	Total	433

ENROLLMENT OF STUDENTS.

Number of students enrolled in the—	1914-15			1915-16		
	Graduate students	Undergraduate students	Total	Graduate students	Undergraduate students	Total
College of Letters and Science:						
Men	285	1,400		325	1,408	
Women	407	2,001		499	2,223	
Totals	692	3,401	4,093	824	3,631	4,455
College of Engineering and Chemistry:						
Men	45	766		44	736	
Women		5		1	4	
Totals	45	771	816	45	740	785
College of Commerce:						
Men	9	298		7	310	
Women		13		1	30	
Totals	9	311	320	8	340	348
College of Agriculture: Full courses—						
Men	43	532		65	537	
Women	4	21		10	28	
Totals	47	553	600	75	565	640
College of Agriculture: Short course—						
Men		171			166	
Women		15			15	
Totals		186	186		181	181
School of Jurisprudence:*						
Men	67			86		
Women	4			8		
Totals	71		71	94		94
School of Architecture:*						
Men	14			6		
Women	4			1		
Totals	18		18	7		7
Medical School: In Berkeley—						
Men	23	42		27	31	
Women	7	7		6	5	
Totals	30	49	79	33	36	69
In San Francisco—						
Men	37			49		
Women	6			9		
Totals	43		43	58		58
In Los Angeles—						
Men				27		
Women				1		
Totals				28		28

*Undergraduate students taking work in the Schools of Jurisprudence and Architecture are registered also in the College of Letters and Science and have been included in the figures given above for that college

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Number of students enrolled in the—	1914-15			1915-16		
	Graduate students	Undergraduate students	Total	Graduate students	Undergraduate students	Total
College of Dentistry:						
Men		109			138	
Women		2			1	
Totals		111	111		139	139
College of Pharmacy:						
Men		91			91	
Women		4			6	
Totals		95	95		97	97
Hastings College of the Law:						
Men		71			76	
Women		2				
Totals		73	73		76	76
San Francisco Institute of Art:						
Men		103			160	
Women		138			249	
Totals		241	241		409	409
Grand totals			6,746			7,386

SUMMER SESSIONS.

	1914	1915
Men	982	1,488
Women	2,197	3,876
Totals	3,179	5,364
Total number of students, deducting duplicate registrations	9,153	11,757

GRADUATED DURING THE YEAR.

	1914	1915
Men	597	663
Women	375	417
Totals	972	1,080

Total number of graduates since the establishment of the University, 13,378.

SUMMARY OF ADDITIONAL ENROLLMENT FIGURES.*

	1914	1915
Wilmerding School of Industrial Arts	191	446
University Farm School	267	314
University Extension:		
Class Bureau	1,095	903
Correspondence courses	1,893	2,060
University Extension in Agriculture:		
Farm home demonstrations	†	3,720
Correspondence courses	11,599	24,306
Lectures by staff of Citrus Experiment Station	3,633	13,988
Various other lectures	17,377	18,727
Farmers' Institutes	10,425	5,106

†Not given.
*Departments in which the work of instruction is, in general, conducted without reference to the satisfaction of requirements for the University degrees.

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INCOME AND EXPENDITURES.

From July 1, 1914, to June 30, 1915.

INCOME.

United States appropriations	$90,000 00	
State appropriations	1,685,387 71	
Students' fees	252,183 25	
Clinics of hospitals and infirmary	53,075 43	
Departmental sales, etc., receipts	199,273 19	
Kearney Vineyard income	40,000 00	
Income from investments	236,854 68	
Gifts:		
For current use	70,388 39	
For buildings and improvements	9,249 92	
For endowments	147,611 71	
Total income		$2,784,024 28

EXPENDITURES.

Administration and operation	$354,341 97	
Buildings and improvements	438,575 86	
Education and research	1,689,402 59	
Disbursements from class funds, scholarships, fellowships and prizes	32,653 17	
Departmental sales, etc., expenditures	187,561 12	
Interest paid to endowment pool, etc.	25,082 13	
Total expenditures		$2,727,616 84

ASSETS, JUNE 30, 1915.

Real estate in Berkeley	$1,498,767 23
Buildings and improvements in Berkeley	3,621,902 81
Real estate and improvements not in Berkeley	3,178,927 60
Equipment	2,535,554 66
	$10,835,152 30

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INCOME AND EXPENDITURES.

Year Ending June 30, 1916.

INCOME.

United States appropriations	$101,037 45	
State appropriations	1,934,482 99	
Students' fees	257,160 95	
Clinics of hospitals and infirmary	71,015 97	
Departmental sales, etc., receipts	189,729 04	
Kearney Vineyard income	40,000 00	
Income from investments	241,242 35	
Gifts:		
For current use	90,193 97	
For buildings and improvements	471,065 47	
For endowments	96,085 52	
Total income		$3,492,013 71

EXPENDITURES.

Administration and operation	$369,188 84	
Buildings and improvements	782,518 43	
Education and research	1,852,521 03	
Disbursements from class funds, scholarships, fellowships and prizes	43,992 07	
Departmental sales, etc., expenditures	178,008 07	
Interest paid to endowment pool, etc.	19,844 75	
Total expenditures		$3,246,073 19

ASSETS, JUNE 30, 1916.

Real estate in Berkeley	$1,545,822 44
Buildings and improvements in Berkeley	4,052,627 00
Real estate and improvements not in Berkeley	3,540,192 74
Equipment	2,622,358 34
	$11,761,000 52

BOOKS IN UNIVERSITY LIBRARY.

1914-15.		1915-16.	
At beginning of year	281,742	At beginning of year	304,666
Bought or donated	23,038	Bought or donated	28,396
Lost or destroyed	114	Lost or destroyed	178
Total at close of year	304,666	Total at close of year	332,884

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STATE TEXTBOOKS.

TABLE No. 33a. Number of Textbooks Sold, and Amount of Money Secured as the Result of Such Sales; Number of Books Distributed Free, Cost of Free Textbooks and Distribution; General Review of Textbooks, Sales, etc.

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Number of Textbooks Sold to Dealers, Orphan Asylums, Private Schools and Individuals from July 1, 1914, to June 30, 1915, Cost Per Book of Manufacture, Amount of Money Paid Into State Treasury from Sale of Books, etc.

Books	Number of books	Cost of manufacture	To school book fund	Royalty	To royalty fund	Price	Amount of sales
Primer	2,770	$0.102	$282 54	$0.048	$132 96	15 cents	$415 50
First Reader	2,440	.102	248 89	.048	117 11	15 cents	366 00
Second Reader	2,320	.1275	295 82	.0525	121 78	18 cents	417 60
Third Reader	1,629	.13	211 77	.06	97 74	19 cents	309 51
Fourth Reader	1,127	.15	169 05	.09	101 43	24 cents	270 48
Fifth Reader	709	.15	106 35	.09	63 81	24 cents	170 16
Speller—Book I	3,680	.115	423 22	.025	91 98	14 cents	515 20
Speller—Book II	1,918	.115	220 59	.025	47 98	14 cents	268 52
First Book in Arithmetic	2,759	.1275	351 75	.0525	144 87	18 cents	496 62
Advanced School Arithmetic	1,549	.14	216 86	.09	139 41	23 cents	356 27
English Lessons—Book I	1,942	.1625	315 60	.0675	131 06	23 cents	446 66
English Lessons—Book II	1,654	.17	281 18	.09	148 86	26 cents	430 04
Introductory History	899	.16	143 84	.15	134 85	31 cents	278 69
Brief School History	1,119	.26	290 94	.15	167 85	41 cents	458 79
Introductory Geography	1,430	.23	328 90	.09	128 70	32 cents	457 60
Advanced Geography	967	.39	377 13	.15	145 05	54 cents	522 18
Primer of Hygiene	657	.12	78 84	.06	39 42	18 cents	118 26
Civics	604	.185	111 74	.125	75 50	31 cents	187 24
Writing—Book I	1,409	.08	42 27	.01	14 09	4 cents	56 36
Writing—Book II	1,250	.03	37 50	.01	12 50	4 cents	50 00
Writing—Book III	1,144	.03	34 32	.01	11 44	4 cents	45 76
Writing—Book IV	945	.03	28 35	.01	9 45	4 cents	37 80
Writing—Book V	1,036	.08	81 08	.01	10 36	4 cents	41 44
Totals	35,957		$4,628 53		$2,088 15		$6,716 68

TABLE No. 33a—Continued.

Number of Textbooks Sold to Dealers, Orphan Asylums, Private Schools and Individuals from July 1, 1915, to June 30, 1916, Cost Per Book of Manufacture, Amount of Money Paid Into State Treasury from Sale of Books, etc.

Books	Number of books	Cost of manufacture	To school book fund	Royalty	To royalty fund	Price	Amount of sales
Primer	2,520	$0.102	$257 08	$0.048	$120 97	15 cents	$378 00
First Reader	2,418	.102	246 65	.048	116 05	15 cents	362 70
Second Reader	2,334	.1275	297 58	.0525	122 54	18 cents	420 12
Third Reader	1,592	.13	206 96	.06	95 52	19 cents	302 48
Fourth Reader	928	.15	139 20	.09	83 52	24 cents	222 72
Fifth Reader	609	.15	91 35	.09	54 81	24 cents	146 16
Speller—Book I	3,473	.115	399 40	.025	86 82	14 cents	486 22
Speller—Book II	1,398	.115	160 76	.025	34 96	14 cents	195 72
First Book in Arithmetic	2,292	.1275	292 24	.0525	120 32	18 cents	412 56
Advanced School Arithmetic	1,364	.14	190 96	.09	122 76	23 cents	313 72
English Lessons—Book I	1,341	.1625	217 90	.0675	90 53	23 cents	308 43
English Lessons—Book II	1,172	.17	199 24	.09	105 48	26 cents	304 72
Introductory History	922	.16	147 52	.15	138 30	31 cents	285 82
Brief School History	1,136	.26	295 36	.15	170 40	41 cents	465 76
Introductory Geography	1,565	.23	359 95	.09	140 85	32 cents	500 80
Advanced Geography	1,202	.39	468 78	.15	180 30	54 cents	649 08
Primer of Hygiene	765	.12	91 80	.06	45 90	18 cents	137 70
Civics	741	.185	137 09	.125	92 62	31 cents	229 71
Writing—Book I	1,284	.03	38 52	.01	12 84	4 cents	51 36
Writing—Book II	1,199	.03	35 97	.01	11 99	4 cents	47 96
Writing—Book III	810	.03	24 30	.01	8 10	4 cents	32 40
Writing—Book IV	725	.03	21 75	.01	7 25	4 cents	29 00
Writing—Book V	367	.03	11 01	.01	3 67	4 cents	14 68
Fourth Reader (old)	70			.12	8 40	12 cents	8 40
English Lessons—Book I (old)	21			.08	1 68	8 cents	1 68
English Lessons—Book II (old)	518			.12	62 16	12 cents	62 16
Totals	32,766		$4,331 32		$2,038 74		$6,370 06

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Number of Books Distributed Free to the Elementary Schools of the State from July 1, 1914, to June 30, 1915, and the Amount of Royalty Paid for the Use of Plates Belonging to the Textbooks Companies.

Books	Number of books	Royalty	To royalty fund
Primer	12,380	$0.048	$594 23
First Reader	10,511	.048	504 54
Second Reader	11,716	.0525	615 09
Third Reader	10,573	.06	634 38
Fourth Reader	10,356	.09	932 04
Fifth Reader	8,547	.09	769 23
Speller—Book I	33,107	.025	827 66
Speller—Book II	20,484	.025	512 10
First Book in Arithmetic	28,298	.0525	1,485 64
Advanced School Arithmetic	22,843	.09	2,055 87
English Lessons—Book I	17,209	.0675	1,161 60
English Lessons—Book II	17,136	.09	1,542 24
Introductory History	11,035	.15	1,655 25
Brief School History	17,773	.15	2,665 95
Introductory Geography	33,636	.09	3,027 24
Advanced Geography	35,919	.15	5,387 85
Primer of Hygiene	12,565	.06	753 90
Civics	10,306	.125	1,288 26
Writing—Book I	35,582	.01	355 82
Writing—Book II	33,530	.01	335 30
Writing—Book III	36,228	.01	362 28
Writing—Book IV	31,313	.01	313 13
Writing—Book V	32,112	.01	321 12
Totals	493,159		$28,100 72

TABLE No. 33a—Continued.

Number of Textbooks Distributed Free to the Elementary Schools of the State, Cost Per Copy of Royalty for Use of Plates and the Amount Paid on Royalty for Use of Plates, from July 1, 1915, to June 30, 1916.

Books	Number of books	Royalty	To royalty fund
Primer	14,649	$0.048	$703 14
First Reader	12,678	.048	608 54
Second Reader	15,030	.0525	789 07
Third Reader	10,893	.06	653 58
Fourth Reader	10,141	.09	912 69
Fifth Reader	10,082	.09	907 38
Speller—Book I	28,312	.025	707 80
Speller—Book II	19,048	.025	476 19
First Book in Arithmetic	26,933	.0525	1,413 99
Advanced School Arithmetic	22,562	.09	2,030 58
English Lessons—Book I	14,756	.0675	996 02
English Lessons—Book II	15,706	.09	1,413 54
Introductory History	9,926	.15	1,488 90
Brief School History	15,660	.15	2,349 00
Introductory Geography	19,689	.09	1,772 01
Advanced Geography	22,708	.15	3,406 20
Primer of Hygiene	11,220	.06	673 20
Civics	8,981	.125	1,122 62
Writing—Book I	41,369	.01	413 69
Writing—Book II	40,647	.01	406 47
Writing—Book III	43,399	.01	433 99
Writing—Book IV	40,396	.01	403 96
Writing—Book V	37,185	.01	371 85
Totals	491,970		$24,454 41

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TABLE No. 33a—Continued.

Approximate Cost of Manufacturing and Distributing Textbooks by Months.

1914.		1915.	
July	$1,167 42	July	$957 22
August	7,489 01	August	5,117 24
September	523 44	September	337 11
October	5,867 80	October	319 86
November	2,239 73	November	175 96
December	19,836 35	December	158 66
1915.		**1916.**	
January	355 42	January	16,280 34
February	162 69	February	28,212 93
March	351 46	March	3,987 86
April	7,052 24	April	8,415 80
May	15,307 88	May	9,159 33
June	2,250 24	June	5,092 46
	$62,603 68		$78,214 77

TABLE No. 33a—Continued.

Total Expenditures Against the School Book Fund for the Sixty-sixth and Sixty-seventh Fiscal Years.

	Royalty	Printing	Freight express	Salary	Miscellaneous	Totals
Sixty-sixth fiscal year	$40,543 58	$69,414 17	$3,155 81	$350 00	$95 23	$113,558 79
Sixty-seventh fiscal year	27,235 08	74,710 65	2,833 12	600 00	66 00	105,444 85

TABLE No. 33a—Continued.

Statement of Royalty Paid Quarterly to the Following Book Companies for the Sixty-sixth and Sixty-seventh Fiscal Years.

Name of company	Sixty-sixth fiscal year	Sixty-seventh fiscal year
American Book Company	$14,131 67	$10,308 16
D. C. Heath & Co.	4,376 43	2,911 94
Macmillan Company	11,745 47	6,959 03
Newson & Co.	1,012 08	850 22
Silver-Burdett & Co.	8,161 39	5,465 93
World Book Company	1,116 54	731 68
Ginn & Co.		8 40
Totals for year	$40,543 58	$27,235 08

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SUMMARY OF TEXTBOOKS.

Sold and Distributed Free: 1887–1916.

Period	Number of books sold (a)	Number of books distributed free (b)	School book fund (c)	Royalty fund (d)	Amount (e)
Prior to July 1, 1904	4,052,327	----------	$1,429,297 52	$10,821 75	$1,440,119 27
July 1, 1904, to June 30, 1906	857,749	----------	310,105 09	87,471 36	395,272 38
July 1, 1906, to June 30, 1908	1,072,575	----------	292,748 67	101,880 05	394,628 72
July 1, 1908, to June 30, 1910	1,178,594	----------	247,944 36	75,859 56	323,803 92
July 1, 1910, to June 30, 1911	663,079	----------	152,341 82	41,922 60	194,264 42
July 1, 1911, to June 30, 1912	683,527	----------	159,113 15	42,100 08	201,213 23
July 1, 1912, to June 30, 1913	476,241	477,983	78,352 70	55,321 72	106,087 84
July 1, 1913, to June 30, 1914	13,526	1,379,154	1,645 48	86,140 38	2,319 56
July 1, 1914, to June 30, 1915	35,957	493,159	4,628 53	30,188 87	6,716 68
July 1, 1915, to June 30, 1916	32,766	491,970	4,331 82	26,498 15	6,370 06
Totals	9,086,341	2,842,216	$2,680,508 64	$568,199 52	$3,070,746 08

Columns (a) and (b) are self-explanatory.

Column (c) is the total amount of money paid into the school book fund as a result of the sale of books listed in column (a).

Column (d) is the amount of money paid to the textbook companies for the use of plates in the manufacture of all state textbooks. This includes both books sold and books distributed free.

Column (e) is the total amount of money paid into the state treasury as the result of sales, column (a).

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STATISTICAL SUMMARY.

TABLE No. 34. General Review of Schools Giving Statistical Summary for the Kindergarten, Elementary, High and Normal Schools. Recapitulation.

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(Kindergarten, Elementary, High and Normal Schools, Institution for the Deaf and the Blind, California Polytechnic School and the University of California.)

(1) Kindergarten Schools.

	1915.	1916.
Number of counties maintaining	20	25
Number of teachers employed (women)	442	548
Grade of certificate held by teachers—		
Kindergarten primary	397	499
Kindergarten (special)	45	49
Totals	442	548
Number of pupils enrolled—		
Boys	8,173	10,300
Girls	8,196	10,421
Totals	16,369	20,721
Average daily attendance	8,691	11,154
Average number of days schools were open for the year	180	173
Average salary paid teachers	$818 01	
Supervisors* (two in state)	----------	$850 00
Principals* (197 in state)	----------	$660 87
Regular teachers* (349 in state)	----------	$588 77
Number of school visits made by—		
County superintendents	527	800
School trustees	420	663
Number of books in libraries	1,633	2,169

Financial Statement.

Receipts from—	1915.	1916.
Balance on hand	$9,492 93	$55,709 48
From tax for maintenance	447,124 77	642,087 95
From special tax for buildings	----------	1,193 62
Donations, etc.	3,005 74	1,171 03
Totals	$459,623 44	$700,162 08
Expenditures for—		
Salaries of teachers	$346,553 05	$409,144 16
Supplies, etc.	38,830 48	127,288 57
Sites and buildings	----------	705 51
Apparatus	----------	4,042 37
Totals	$386,955 61	$550,840 51
Balance unexpended	$72,667 83	$149,321 57
Average tax rate for—		
Maintenance	$0 07	$0 064
Buildings	----------	03
Average cost per pupil per year's salaries and supplies	23 54	26 12
Number of schoolhouses built of—		
Concrete	6	1
Brick	2	5
Wood	39	46
Totals	47	52

Many of the kindergarten schools are held in the elementary buildings. Hence a variation in the report on buildings and valuation of property.

Valuation of property—	1915.	1916.
Sites, buildings and furniture	$79,948	$97,318
Library books	5,160	3,518
Apparatus	----------	8,652
Totals	$85,108	$109,488

*The plan of giving salaries of supervisors, principals and teachers separate was not adopted till 1916.

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	1915.	1916.
Number of school districts—		
Active at beginning of year	3,402	3,456
Newly organized	77	56
Suspended re-established	26	31
Lapsed	7	11
Suspended during year	32	30
Combined	14	8
Total active at close of year	3,452	3,494
Number of districts in union schools	----------	27
Number of schoolhouses built of—		
Stone	32	18
Concrete	131	161
Brick	339	368
Wood	4,101	4,147
Totals	4,603	4,694
Number of districts maintaining school—		
Less than 120 days	15	19
Between 120 and 160 days	482	1,018
Between 160 and 200 days	2,656	2,410
Over 200 days	252	20

(The falling off in time is due to less funds, owing to the repeal of the poll tax and to a closer estimate since the time for 1916 was actual time the school was open. 1916 in many instances included institute and holidays.

	1915.	1916.
Number of teachers estimated on average daily attendance (for apportionment of money)	11,646	11,975
Number of teachers employed—		
Men	1,238	1,202
Women	11,767	12,080
Totals	12,969	13,318
Grade of certificate held by teachers in elementary schools—		
High school	536	544
Elementary or grammar school	11,623	11,924
Primary	70	64
Special	740	786
Totals	12,969	13,318
Enrollment of pupils:		
First year—		
Boys	46,463	46,269
Girls	40,397	40,548
Second year—		
Boys	29,766	29,203
Girls	25,942	26,749
Third year—		
Boys	27,657	28,533
Girls	25,389	26,537
Fourth year—		
Boys	26,622	27,346
Girls	25,091	24,879
Fifth grade—		
Boys	24,932	25,638
Girls	22,956	22,992
Sixth grade—		
Boys	22,193	23,453
Girls	20,526	21,552
Seventh grade—		
Boys	20,769	20,848
Girls	19,244	19,493
Eighth grade—		
Boys	19,685	19,538
Girls	18,723	19,424
Total boys	217,524	221,388
Total girls	198,268	202,174
Grand totals	415,792	423,562

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Number of pupils enrolled in postgraduate grammar schools:	1915.	1916.
First year—		
Boys		174
Girls		213
Second year—		
Boys		9
Girls		15
Total boys		183
Total girls		228
Grand total		411

(The law creating this school or course did not go into effect till August, 1915.)

Number of graduates from grammar schools—	1915.	1916.
Boys	13,480	13,440
Girls	14,029	14,069
Totals	27,509	27,509
Number of graduates from postgraduate schools—		
Boys		12
Girls		14
Total		26
Average number of days school was maintained for year	172	166
Average daily attendance	331,000	340,943
Number of visits made by—		
County superintendents	21,947	24,038
School trustees and members of boards of education	19,655	20,352
Number of books in school libraries	2,859,277	2,928,203
Number of books in county teachers' libraries in office of county superintendent	49,651	75,686

Financial Statement.

Receipts from—	1915.	1916.
Balance on hand	$4,648,666 49	$5,117,172 56
State apportionments	5,667,022 11	5,719,103 60
County taxes	6,411,390 82	6,493,157 78
City or district taxes	4,197,062 93	4,715,041 22
Sale of bonds for building	5,208,550 96	3,805,272 04
Miscellaneous sources	858,616 27	708,147 98
Total resources for year	$26,991,309 58	$26,557,895 18
Expenditures for—		
Teachers' salaries	$12,062,538 24	$12,040,008 31
Current expenses, supplies, etc	4,027,254 14	3,852,098 73
Sites and buildings	5,417,941 88	5,550,022 70
Library books	153,404 48	175,481 16
Apparatus (included in books for 1915)		44,464 33
Total expenditure	$21,661,138 74	$21,662,075 23
Balance on hand at close of year	$5,330,170 84	$4,895,819 93
Valuation of property—		
Sites, buildings and furniture	$53,711,086	$56,206,702
School libraries	1,158,292	1,044,417
Apparatus	697,089	772,607
Totals	$55,565,467	$58,023,726

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	1915.	1916.
Average tax for county school purposes	$0.273	$0.286
Average special tax rate for—		
Maintenance	.214	.1883
Buildings	.321	.3211
Total amount of outstanding bonds	$23,099,987	$28,600,496
Average rate of interest paid on bonds	$0.054	$0.0567
Cost per pupil per annum for education, excluding cost of new buildings	$39 06	$38 04
Average rate per pupil apportioned on average daily attendance by counties, which includes state and county money after giving the $550 per teacher	$15 93	$16 58
Average annual salary paid teachers, that is average amount of money paid the teacher for the year—		
Men	$1,060 55	
Women	746 21	

The plan of giving salary was changed for 1916, and the following report is shown:

	No.	
Supervising principals—		
Men	190	$1,982 50
Women	157	1,921 43
Paid principals—		
Men	435	1,223 99
Women	737	970 05
Regular teachers—		
Men	381	841 93
Women	10,535	868 95
Special:		
Supervisors of subjects—		
Men	60	1,537 91
Women	131	1,409 60
Teachers of subjects—		
Men	170	1,040 20
Women	522	919 77

(3) High Schools.

Number of schools—	1915.	1916.
County	21	*8
City	49	62
District	41	45
Union	137	155
Joint union	17	18
Totals	265	288
Number and kinds of school buildings—		
Stone	9	32
Concrete	68	79
Brick	133	165
Wood	138	119
Totals	348	395
Number, sex and position of teachers:		
Regular—		
Men	----------	1,112
Women	----------	1,721
Special—		
Men	----------	498
Women	----------	668
Total men	1,394	1,610
Total women	1,989	2,389
Grand total	3,383	3,999

*Many county high schools were changed to union by act of 1915.

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	1915.	1916.
Total number of students enrolled by year and by sex:		
First year—		
Boys	19,314	23,997
Girls	19,097	23,009
Second year—		
Boys	7,823	9,930
Girls	9,257	11,159
Third year—		
Boys	5,009	6,683
Girls	6,109	8,342
Fourth year—		
Boys	4,072	5,576
Girls	5,748	6,909
Total boys	36,218	45,986
Total girls	40,211	49,419
Grand total	76,429	95,405
Number of graduates for year—		
Boys	3,525	3,781
Girls	4,851	5,182
Totals	8,376	8,963
Number of students enrolled in postgraduate departments:		
First year—		
Boys	----------	393
Girls	----------	550
Second year—		
Boys	----------	91
Girls	----------	84
Total boys	----------	484
Total girls	----------	634
Grand total	----------	1,118
Attendance, etc.:		
Average daily attendance	53,397	58,881
Average length of term (in days)	185	187
Number of volumes in libraries	367,924	413,477

Financial Statement.

Receipts from—	1915.	1916.
Balance on hand	$2,856,830 57	$2,656,299 69
State apportionments	725,412 12	827,200 52
County taxes	----------	3,326,893 22
District taxes for maintenance	6,651,756 70	3,802,076 52
District taxes for building	2,185,013 73	117,713 20
Sale of bonds	----------	1,717,016 93
Miscellaneous sources	133,481 13	756,006 70
Totals	$12,516,494 25	$13,203,206 78

NOTE.—The law providing county tax for high schools went into effect August, 1915. Special tax and bonds for buildings were reported as one up to 1916, hence change this year.

Expenditures for—		
Salary of teachers	$4,658,412 87	$5,266,521 40
Janitors and other employees	----------	678,327 25
Supplies, wood, etc.	1,852,981 91	1,119,773 94
Books and apparatus	145,748 13	158,145 74
Laboratory supplies	----------	96,745 59
Sites, buildings and furniture	2,986,724 02	2,594,226 03
Totals	$9,643,866 93	$9,943,739 95
Balance on hand at close of year	$2,872,627 32	$3,289,466 83
Average cost per pupil for all cost of high schools, excepting the cost for buildings	$87 10	$76 72

NOTE.—This cost has fallen off mainly on account of the large number of students enrolled in the evening high schools.

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	1915.	1916.
Average tax rate for—		
County, for maintenance		$0.142
District tax for maintenance	$0.345	.235
District, for building	.168	.1175
Rate of interest paid on bonds	.0516	.0514
Total outstanding bonds	$12,322,843	$13,154,639
Valuation of all property—		
Sites, buildings and furniture	$22,608,825	$25,150,585
Laboratories, etc.	682,902	859,092
Books and apparatus	495,100	578,993
Totals	$23,786,827	$26,588,670
Average salary paid teachers:		
Principals—	No.	
Men	264	$2,104 22
Women	15	1,574 00
Teachers (regular)—		
Men	856	1,455 85
Women	1,697	1,331 43
Special—		
Men	496	1,295 49
Women	671	1,271 70

Up to 1916 the annual salary was given simply by men and women. For 1915 the following was reported:

Men	$1,502 96
Women	1,157 20

Miscellaneous School Statistics.

	1915.	1916.
Number of teachers attending institutes—		
High schools	3,263	3,861
Elementary schools	12,465	12,884
Kindergartens	411	524
Totals	16,139	17,269
Cost of teachers' institutes—		
Paid instructors	$14,238 95	$10,541 70
Paid for expenses	3,417 58	3,908 22
Totals	$17,656 53	$14,549 92
Cost of trustees' meetings—		
Paid instructors	$345 10	$1,117 90
Paid for expenses	1,350 85	2,513 40
Totals	$1,695 95	$3,631 30

NOTE.—In most instances the expenses are paid from the county or current expense of the school districts. The law really intends this. But in some of the counties the superintendent pays directly from the unapportioned county school funds. In the first instance the expense is not shown in this report, as it is included in the expense of the school district. In the report given here is included the expenses paid from the general or unapportioned county school fund.

	1915.	1916.
Number of certificates issued by county boards of education for the year:		
On examination, to—		
Men	117	87
Women	468	329
On credentials, to—		
Men	765	678
Women	3,533	4,537
Amount of fees collected for examination and issuance of certificates	$11,549	$12,878
Number of teachers in kindergarten, elementary and high schools	16,794	17,860
Number of pupils enrolled in kindergarten, elementary and high schools	508,590	540,688
Total average daily attendance in kindergarten, elementary and high schools	393,088	410,978

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Miscellaneous sources	$37,897,997 00	$32,652,082 46
Total expenditures for kindergarten, elementary and high schools	31,691,961 28	30,126,651 69
Total cost for salary of county superintendents and deputies		$204,877 43
Cost of traveling of such officers		18,021 35
Cost of postage and expressage		1,163 74
Other expenses—supplies, etc.		13,748 80
Total		$243,811 32
Total cost of salaries of members of county board of education		$57,452 53
Traveling expenses of members		7,594 88
Other expenses		6,181 46
Total		$71,228 87
Total cost of city superintendents for salaries and for salaries of deputies		$235,165 55
Cost of traveling for such officers		4,973 13
Other office expenses		27,168 87
Total		$267,307 55

(4) State Normal Schools.

	1915.	1916.
Number of schools	8	8
Number of teachers employed:		
Men	69	75
Women	198	209
Totals	267	284
Number of students enrolled:		
Normal department—		
Boys	295	382
Girls	4,331	4,615
Totals	4,626	4,997
Number of pupils enrolled:		
Training schools—		
Boys	1,535	1,583
Girls	1,628	1,670
Totals	3,163	3,253
Number of graduates:	1915.	1916.
Boys	95	93
Girls	1,739	1,515
Totals	1,834	1,608
Grand total since organization:		
Boys		1,172
Girls		15,962
Grand total		17,134

Financial Statement.

Receipts from—		
Balance on hand	$167,336 94	$32,607 06
State appropriations	790,709 65	1,109,042 50
Tuition and other sources	36,462 39	9,054 19
Miscellaneous sources		16,356 59
Totals	$995,508 98	$1,161,060 34
Expenditures for—		
Salary of teachers	$384,185 88	$488,926 85
Janitors, labor and supplies	107,453 02	123,539 36
Sites, buildings and furniture	113,106 62	267,810 14
Books and apparatus	10,587 87	11,368 52
Totals	$615,333 39	$891,644 87
Balance on hand in funds of schools	$380,175 59	$269,915 27

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Valuation of property		
Grounds	$573,000	$570,500
Buildings	1,744,570	2,116,584
Furniture	115,149	227,223
Books	212,429	104,867
Apparatus	51,001	39,125
Supplies on hand		13,978
Totals	$3,696,149	$3,072,277
Number of acres in normal grounds	159.47	160.97
Number of books in libraries—		
At beginning of year	91,394	97,315
Bought or donated	8,538	10,879
Lost or destroyed	—1,860	—4,707
Total at close of year	98,072	103,487

(5) Recapitulation.

	1915.	1916.
Number of elementary school districts	3,452	3,494
Number of high schools	265	288
Number of teachers employed in all schools—		
Kindergarten	442	548
Elementary	12,969	13,318
High schools	3,383	3,999
Normal schools	267	284
California Polytechnic	15	17
Institution for the Deaf and the Blind	36	39
University of California	411	433
Totals	17,523	18,638
Students enrolled in all schools—		
Kindergarten schools	16,369	20,721
Elementary schools	418,955	427,231
High schools	76,429	†96,523
Normal schools	4,626	4,997
California Polytechnic School	162	176
Institution for the Deaf and the Blind	286	276
University of California	‡6,746	‡7,336
Totals	523,573	557,350
Receipts—		
Kindergartens	$459,623 44	$700,167 08
Elementary schools	26,991,309 58	26,557,895 18
High schools	12,516,494 25	13,203,206 78
Normal schools	995,508 98	1,161,006 34
California Polytechnic	89,643 93	89,898 09
Institution for the Deaf and the Blind	105,637 12	115,868 54
University of California	2,784,024 28	3,492,013 71
Totals	$43,942,241 58	$45,320,055 72
Expenditures—		
Kindergartens	$386,955 61	$550,840 51
Elementary schools	21,661,138 74	21,662,075 23
High schools	9,643,866 93	9,913,739 95
Normal schools	615,333 39	891,644 87
California Polytechnic	81,041 78	88,582 43
Institution for the Deaf and the Blind	102,273 75	110,266 35
University of California	2,727,616 84	3,246,073 19
Totals	$35,218,227 04	$36,463,222 53

*Includes 3,253 elementary pupils enrolled in normal training schools and 411 postgraduate grammar school pupils.

†Includes 1,118 postgraduate high school students.

‡Includes regularly enrolled students. See University Report for summer school enrollment and the California Polytechnic Report for pupils enrolled in extension courses.

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Elementary schools	55,566,467 00	58,023,726 00
High schools	23,786,827 00	26,588,670 00
Normal schools	2,696,149 00	3,072,427 00
California Polytechnic	*558,669 00	558,669 00
Institution for the Deaf and the Blind	*1,343,081 00	1,343,081 00
University of California	10,835,152 00	11,761,000 00
Totals	$94,871,445 00	$101,457,061 00
Number of books in school libraries—		
Kindergartens	1,633	2,169
Elementary schools	2,859,277	2,928,203
High schools	367,924	413,477
Normal schools	98,072	103,487
California Polytechnic	3,500	3,600
Institution for the Deaf and the Blind	3,800	6,300
University of California	304,666	332,884
Totals	3,638,872	3,790,120
Number of graduates—		
Elementary schools	27,509	*27,509
High schools	8,376	8,882
Normal schools	1,834	1,608
California Polytechnic	22	----------
Institution for the Deaf and the Blind	19	21
University of California	972	1,080
Totals	38,732	39,100
Total outstanding bonded debt—		
Elementary schools	$24,093,010 00	$28,600,496 00
High schools	12,349,843 00	13,361,189 00
Totals	$36,442,853 00	$41,961,685 00

Total Expenses for All School Purposes.

	1915.	1916.
Kindergartens	$386,955 61	$550,840 51
Elementary schools	21,661,138 74	21,662,075 23
High schools	9,643,866 93	9,913,739 95
Totals	$31,691,961 28	$32,126,655 69
Overhead expenses—		
Office of county superintendent of schools	----------	$243,811 32
Expense of county board of education	----------	71,228 87
Expenses of city offices	----------	†267,307 55
Total	----------	$315,040 19
Office of superintendent of public instruction	$16,512 90	$17,584 91
Total cost of state board of education	31,647 95	25,816 57
Entire cost of textbooks, manufacture, royalty, cost of shipment, etc.	113,558 79	105,444 85
Totals	$161,719 64	$148,846 33
State normal schools	615,333 39	891,644 87
California Polytechnic School	81,041 78	88,582 43
Institution for the Deaf and the Blind	102,273 75	110,266 35
University of California	2,727,616 84	3,246,073 19
Totals	$3,526,265 76	$4,336,566 84
Grand totals	$35,379,946 68	$36,927,109 05

*Same as 1916, as no report was given for 1915.
†This item is included in the regular school expenses and is not added in the total.

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